

# PSYCHOLOGICAL ABSTRACTS

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## GENERAL

4325. Brown, J. F. On the use of mathematics in psychological theory. *Psychometrika*, 1936, 1, 7-15.—The article is concluded from previous issues of this journal, and is a discussion of non-metricized dynamical concepts, such as fluidity, degree of freedom of social locomotion, permeability and vectors. Some applications to psychological problems are given. Bibliography.—J. Brockwell (Brown).
4326. Carey, T. F. An anthropometric measuring board. *Child Developm.*, 1936, 7, 57-59.—The author presents the details of the construction of an inexpensive portable measuring board for measuring standing height, sitting height, leg length, arm span, foot width and foot length.—W. McTeer (Wayne University).
4327. Claparède, E. Georg-Elias Müller (1850-1934). *Arch. Psychol., Genève*, 1935, 25, 110-114.—A biography accompanied by a recent photograph taken by the author.—M. R. Lambercier (Geneva).
4328. Duerk, H. Psychology in questions and answers. New York: Kenedy, 1936. Pp. 255. \$1.50.—An explanation of the principal problems and discoveries of psychology, ancient and modern, for the general reader.—R. R. Willoughby (Brown).
4329. Fuchs, S. H. Zum Stand der heutigen Biologie. Dargestellt an Kurt Goldstein: "Der Aufbau des Organismus." (The position of present-day biology as portrayed in Kurt Goldstein's "The Structure of the Organism.") *Imago, Lps.*, 1936, 22, 210-241.—An examination of Goldstein's totality doctrine in biology with respect to biology, philosophy, psychology, and psychoanalysis. Appreciation of the advantages of the totality position is combined with doubt as to the rejection of such hitherto fundamental principles as the neurone theory, Bell's law, etc. The dynamic aspect of the view is in some ways favorable to psychoanalysis, but it excludes entirely certain leading conceptions like the death instinct.—H. D. Spoerl (American International College).
4330. Georgiade, C. Psihologie sau fizica. (Psychology or physics.) *Anal. Psihol.*, 1935, 2, 142-158.—A criticism of Zapan's theory on perception, published a year ago in the Rumanian *Journal of Philosophy*. Zapan applies the principles of Gestalt psychology and explains perception very much on an analogy with physical principles. The author claims that this way of explanation is not the best. Psychology has to be explained by psychology and not by physics. Physics can give us analogies, but no more. Too many incursions of a psychologist into physics might indicate a defense mechanism due to ignorance of psychology.—N. Margineanu (Cluj, Rumania).
4331. Gib, C. D. Hermann Lotze si cercetarile sale in domeniul psihologiei. (Hermann Lotze and his contributions to psychology.) *Anal. Psihol.*, 1935, 2, 47-69.—Lotze's life and contributions to psychology are discussed; also his theory of the ego as an act, his theory of spatial perception, and local signs.—N. Margineanu (Cluj, Rumania).
4332. Haskovec, V. Za akademikem Ivanem Petrovicem Pavlovem. (The Academician Ivan Petrovich Pavlov.) *Rev. Neurol. Psychiat., Praha*, 1936, 33, 25-27.—Description of a visit to Pavlov's laboratory and emphasis upon the latter's contribution to experimental medicine.—Z. Piotrowski (Columbia).
4333. Helwig, P. Seele als Ausserung. Untersuchungen zum Leib-Seele-Problem. (The mind as expression. Studies on the mind-body problem.) Leipzig, Berlin: Teubner, 1936. Pp. 124.—R. R. Willoughby (Brown).
4334. Higginson, G. D. A systematic approach to psychology in terms of function and product. *J. Psychol.*, 1936, 2, 1-23.—The thesis that a consistent psychology can be written only in terms of function and product is defended. As man's physiological functions are understood by way of their products and their causal determinants, so must man's psychological functions be understood through products and determinants. Meaning, however meager, is inherent in all psychological products and is unique in that it alone is directly observed. The individual observes that which he produces. All psychological products belong to the same phenomenal order (products), so a consistent psychology can find no place for a stimulus-response category when such implies that man responds directly to perceived stimuli (energy). Environmental factors affect man's psychological products; they form one group of causal agents, which along with two others (those which concern the hereditary constitution, and those factors which arise directly out of the individual's personal history) govern them completely. Being forms of energy (stimuli), however, these environmental factors are never perceived. Such a systematic position is seen to simplify the mind-body problem, and also to provide an adequate principle of scientific integration, for it obviates the necessity for shifting postulates as one covers the field of psychology. The writer illustrates how this integrative principle works with regard to learning (adding new meanings), satisfaction, intelligence, etc.—J. McV. Hunt (Brown).
4335. Jellinek, E. M. [Ed.] Biometric bulletin. Worcester, Mass.: Biometric Laboratory of the Memorial Foundation for Neuro-Endocrine Research and the Research Service of the Worcester State Hospital. Vol. 1, No. 1, 1936. Quarterly. \$2.00 per annum.—R. R. Willoughby (Brown).



4336. Kellogg, W. N. A device for measuring kymographic records. *J. exp. Psychol.*, 1936, 19, 383-385.—Description of a device built on the principle of a planimeter and developed at Indiana University for measuring irregular kymographic tracings. The instrument can be adjusted to compensate for, or eliminate from its measurements, the arc of the original kymographic writing point which traced the line being measured. Photographs showing the construction of the device and the method of using it are given.—H. W. Karn (Pittsburgh).

4337. Krijanskaya, D. A. [An apparatus for examining visual functions (accommodation and convergence).] In [*The psychophysiology of industrial work*]. Leningrad: 1936. Pp. 190-195.—The authors have constructed a special apparatus for the purpose of investigating the near point of clear vision as well as the condition of the muscular equilibrium of the eye at short distances. As a result of applying this apparatus in both laboratory and industrial conditions they have succeeded in obtaining constant data showing that under the influence of trained visual work accommodation and convergence undergo considerable changes characteristic of each person. It is also possible by means of this device to investigate the far point, to determine the power and range of accommodation, to determine the visual acuity at short distances, etc.—A. Yarmolenko (Leningrad).

4338. Lorge, I., & Waits, J. V. A multi-multiple-choice machine for experimental work with rewards and punishments. *J. exp. Psychol.*, 1936, 19, 386-396.—Adequate information concerning some of the subtler influences of rewards requires the data from at least 600 subject-hours of experimentation. To collect such data the ordinary individual experimental procedure was adapted to group work by means of the multi-multiple response machine. The machine, basically, consists of an exposure apparatus for presenting the stimuli, and reaction keys for choice responses. 13 typewriters, one for each of 13 subjects, provide the reaction keys, which serve three purposes: response to the stimuli, recording the responses, and administration of the rewards, punishments, and ambiguous after-effects. Wiring diagrams are included in the report.—H. W. Karn (Pittsburgh).

4339. McDougall, W. Dynamics of the Gestalt psychology. Part II. *Character & Pers.*, 1936, 4, 319-334.—Corresponding to the field of forces in physics, Koffka devises a psychological field of forces containing bodies which are moved within this field and undergo changes. Of the two principal parts of the field, the ego and the behavioral environment, the latter is directly concerned with and caused by the impressions received from the geographical environment. It corresponds to Köhler's sensory field. Although Koffka vaguely recognizes conative experience, he does not recognize it as immediate. Following a characterization of this explanatory principle, McDougall criticizes Koffka's treatment of attention, the ego, emotion and other dynamic factors and defends his own treatment of the problem

of dynamics against some of Koffka's criticisms.—M. O. Wilson (Oklahoma).

4340. Michalski, S. [Ed.] *Organon, international review*. Warsaw: Mianowski Institute for the Promotion of Science and Letters. Vol. 1, 1936.—R. R. Willoughby (Brown).

4341. Ponzo, M. *Attualità e visioni dell'avvenire nell'opera di Sante De Sanctis*. (Actuality and vision of the future in the works of Sante De Sanctis.) *Riv. Psicol. norm. pat.*, 1936, 32, 1-26.—A memorial address made at the eighth national congress of Italian psychologists, at Rome, April, 1936.—T. M. Abel (Progressive Education Association).

4342. Roulleau, M. *Un appareil de mesure des très faibles brillances*. (An apparatus to measure very weak intensities.) *Rev. Opt. (théor. instrum.)*, 1934, 13, 375-377.—The apparatus is made up of a brightness standard (opal glass) which can vary from  $10^{-6}$  and  $10^{-10}$  candles/cm.<sup>2</sup>, with a diaphragm opening which can be registered in total darkness.—(Courtesy *Année psychol.*)

4343. Selz, O. *Les problèmes génétiques de la totalité et le problème phénoménologique de la construction des tous et des formes*. (Genetic problems of totality and the phenomenological problem of the construction of wholes and forms.) *J. Psychol. norm. path.*, 1936, 33, 88-113.—A distinction must be made between laws of development and laws of phenomenological construction. The author claims that, just as the phenomenological problem of construction has been masked in the dynamic theory of forms by the physiological genetic approach, so, in Krueger's psychology of wholes, it is obscured by the psychological genetic approach. The psychologists who follow Krueger ignore a systematic explanation of wholes and forms based on a phenomenological construction and recognize only a genetic explanation.—R. E. Perl (New York City).

4344. Sereisky, M. J. I. P. Pavlov (1849-1936). *Character & Pers.*, 1936, 4, 344-348.—Pavlov's work can be divided into four periods, each characterizing a certain phase of his scientific career: (1) mechanism of innervation of heart activity; (2) digestion, emphasizing especially the nervous system as a regulator of digestion; (3) conditioned reflex; and (4) human psyche. Throughout his career he was interested in the functions of the nervous system. As a man, "He was that very rare combination of a cautious scientist, a man of rare imagination, exceptional optimism which grew with age, colossal organizing ability and precision of thought." The Soviet government paid particular attention to and took special interest in Pavlov and his work.—M. O. Wilson (Oklahoma).

[See also abstracts 4424, 4586, 4645.]

## SENSATION AND PERCEPTION

4345. Baier, D. E. The loudness of complex sounds. *J. exp. Psychol.*, 1936, 19, 280-308.—The purpose of this experiment was to study the variation in the loudness of certain complex sounds resulting



from changes in the intensities and frequencies of the components. The subject was presented alternately with a single pure tone and with a complex sound which consisted of two pure tones produced simultaneously. He adjusted the intensity of the single tone until it appeared as loud as the complex sound. The tones were produced electrically by two oscillators supplying two telephone receivers. It was found that the greater the combined intensities of the components of the complex sounds 1600-1400, 1600-2000, 1600-4000 cycles, the more the intensity of either component must be raised in order to obtain a given increment of loudness. There was a tendency for the judgment of the loudness of a complex sound, when defined in terms of a simple comparison tone, to be influenced by the pitch of the comparison tone. The report includes a comparison of the present results with similar data previously obtained by Fletcher and Munson.—*H. W. Karn* (Pittsburgh).

4346. Bartley, S. H. The basis of the flicker in the visual field surrounding the test object. *J. exp. Psychol.*, 1936, 19, 342-350.—This paper gives a comparison of the critical frequencies for flicker as seen in the test object and in the visual field surrounding it. A range in both intensity and area of test object was used. Two demonstrations that flicker in the field outside of the test object is instituted by stray light rather than by retinal interaction are described. The critical fusion frequencies of the field in relation to those of the test object indicate that after flicker is instituted by stray light, some sort of interaction between the two areas of the retina stimulated at different intensities helps to determine critical fusion frequency of the field at least near the test object.—*H. W. Karn* (Pittsburgh).

4347. Bielschowsky, A. Functional disturbances of the eyes. *Arch. Ophthalm.*, Chicago, 1936, 15, 589-603.—Subjective symptoms are similar in ametropia, aniseikonia, and in all types of heterophoria; only their elimination can show to what they have been due. Careful studies indicate the presence of heterophoria in more than 80% of cases, but frequently little if any of the phoria can be made manifest by usual methods of testing. This is because fusional innervation fails to relax completely even when conditions are designed to eliminate the fusion impulse. Persistence of some degree of fusional innervation is demonstrated experimentally by the apparent hyperphoria, which continues for some time after discarding of the vertical prisms whose wearing had induced the compensatory deviation. Repeated tests fail to give consistent results because of the partial and unequal relaxation of fusional innervation. Alternating hyperphoria is explained by persistence of innervational impulses for positive or negative vertical divergence. The relative importance of aniseikonia and anisophoria in producing symptoms has not been demonstrated, the difficulty in testing the former and the variability of the latter making such comparisons extremely difficult.—*M. R. Stoll* (Mass. Eye & Ear Infirmary).

4348. Bourdon, B. Une méthode simple pour combiner binoculairement les couleurs. (A simple

method for the binocular combination of colors.) *J. Psychol. norm. path.*, 1936, 33, 131-132.—The method described presents two colors simultaneously, one to each eye, and at the same time allows the subject to have a normal binocular perception of each color.—*R. E. Perl* (New York City).

4349. Carnevale, R. Sordità senile. (Senile deafness.) *Boll. Mal. Orecch.*, 1935, No. 6, 302-303.—*G. M. Hirsch* (Rome).

4350. Casati, E. Modificazioni del campo visivo nei piloti di aviazione. (Modifications in the visual field of aviation pilots.) *Atti Accad. Sci. med. nat. Ferrara*, 1934, 11, No. 2.—Concentric diminishing of the visual field, due chiefly to muscular over-fatigue.—*G. M. Hirsch* (Rome).

4351. Cronstedt, L. Bedömandet av synförmågan vid blindhetsersättning. (The judgment of visual ability in relation to compensation for blindness.) *Svenska Läkartidn.*, 1936, 33, 659-663.—Compensation in one form or another for blindness presupposes official definitions of blindness. The writer gives a review of such definitions now in use in various countries and discusses prevailing conditions in Sweden in this problem.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4352. Cronstedt, L. En metod för bestämmande av höggradigt nedsatt synförmåga och samtidigt utförande av simulationsprov. (A method for determining high-grade decreased vision and simultaneously conducting a test for simulation.) *Svenska Läkartidn.*, 1936, 33, 663-664.—The writer describes the method which he employs, using the tables he originated, for the purposes mentioned in the title.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4353. Dean, F. W. Anatomic phorias. *Arch. Ophthalm.*, Chicago, 1936, 15, 692-693.—Reports a summary of cases in which correcting prisms for exophoria or hyperphoria have been worn for periods of many years without appreciable increase in the deviation. The author concludes that phorias in such cases are due not to innervational but to anatomic conditions—either to malposition of the fovea, or, more probably, to malposition of the globe in the cone of external muscles. In view of the fact that eyes are at the sides of the head in embryonic life, the author finds it reasonable to expect anomalies in their end positions.—*M. R. Stoll* (Mass. Eye & Ear Infirmary).

4354. Ferree, C. E., & Rand, G. Intensity of light in relation to the examination of the eye. *Brit. J. Ophthalm.*, 1936, 20, 331-346.—The points given consideration are: (1) the correction of errors of refraction; (2) the standard rating of acuity and its rating for other purposes; (3) the determination of the near point of vision and the apparent range of accommodation; (4) the study of the visual field with the tangent screen and the perimeter.—*R. J. Beitel, Jr.* (American Optical Company).

4355. Frank, H. "Word blindness" in school children. The predominant causal role of delayed development of perceptual functions. (Abstract.) *Brit. J. Ophthalm.*, 1936, 20, 309.—"Tests taken with

35 backward readers and 350 children from infant schools have shown that the difficulties in reading in the backward children were caused by the same mistakes as are made by the normal beginner. . . . Psychological analysis of these mistakes reveals them to be due to certain general characteristics of the young child's perception: 'the importance of the general shape' with the neglect of certain details—e.g., the situation in space—and the 'solidity of the shape.' There is an analogy to the psychological behavior of primitive people."—R. J. Beitel, Jr. (American Optical Company).

4356. Fry, G. A., & Bartley, S. H. The effect of steady stimulation of one part of the retina upon the critical frequency in another. *J. exp. Psychol.*, 1936, 19, 351-356.—"A steady stimulus applied to one area of the retina affects the c.f.f. of an intermittent stimulus in another area. As the intensity of the steady stimulus is increased from zero upward, the c.f.f. rises, but when a critical point is reached it falls again. This fact has been accounted for by assuming that the steadily stimulated area depresses activity in the flickering area; below the critical intensity it depresses the weak phases of activity and raises the c.f.f.; above the critical intensity it depresses the strong phases also and thus lowers the c.f.f. The fact that the reversal of the effect fails to occur when the distance between the two stimuli is large is due to the fact that the critical intensity increases with the distance, and when the distance is large the critical intensity lies beyond the range of intensities investigated."—H. W. Karn (Pittsburgh).

4357. Gelhorn, E. The effect of  $O_2$ -lack variations in the  $CO_2$ -content of the inspired air, and hyperpnea on visual intensity discrimination. *Amer. J. Physiol.*, 1936, 115, 679-684.—In a previous paper it was reported that  $O_2$  lack,  $CO_2$  excess, and hyperpnea increased the latency of the visual after-image. In the present study intensity discrimination was used as another important criterion of vision. Two Mason disks were rotated 1 meter in front of the eyes, using 10 brightness steps from 1/42 to 1/230. Inhalation was accomplished through a Douglas bag mouthpiece, the subject having no knowledge when air was substituted at the end of the experiment. Both eyes were used, and artificial pupils produced no difference in the results.  $O_2$  lack (8 to 10%  $O_2$ ) produced a considerable loss of sensitivity (threshold increased approximately 5 times), which was quickly reversible in air; 6%  $CO_2$  produced a smaller loss, with large individual differences in time of recovery (from before admission of air to 4 minutes after). Hyperpnea produced by maximal breathing at 35 per minute for 2 minutes produced a reversible loss of sensitivity of magnitude similar to the  $O_2$  lack. After  $O_2$  lack and hyperpnea there was often a supernormal phase. The results are comparable with previous studies on hearing and visual after-image. It is held that although the effects on hearing are probably of cortical or sub-cortical origin, in vision ganglion cells in the retina, as well as cortical cells, are probably sensitive to  $O_2$  lack.—T. W. Forbes (N. Y. Psychiatric Institute).

4358. Gersuni, G. V., & Volokhov, A. A. On the electrical excitability of the auditory organ on the effect of alternating currents on the normal auditory apparatus. *J. exp. Psychol.*, 1936, 19, 370-382.—Evidence is presented which shows that the auditory sensations arising during the flow of alternating currents through an uninjured auditory apparatus, beginning with 100 d.v., entirely correspond to the sensations observed during adequate stimulation. It is suggested that these sensations are the result of the rise in the current circuit of mechanical vibrations which stimulate the cochlea in an ordinary way. The mechanical vibrations do not arise either in the electrodes of the apparatus or in the middle ear cavity. Arguments are brought forward in favor of the possibility of the rise of mechanical vibrations in the cochlea.—H. W. Karn (Pittsburgh).

4359. Gurevich, M. O. [The disorders of space perception.] *Neuropat., Psikhiat., Psikhogig.*, 1936, 5, 527-535.—The disorders of the complex gnostic functions, especially space perceptions, have their own place in the symptomatology of psychic disorders. The gnosis of space is a synthetically formed function interrelated with other mechanisms. In the structure of this function the fundamentals are the vestibulo-optical and vestibulo-haptical mechanisms, the disintegration of which causes the vestibular symptomatology. The phenomena of destruction of space gnosis form a definite complex, being of the same origin. The localization of these phenomena is probably in the parieto-occipital field.—A. Yarmolenko (Leningrad).

4360. Hische, W. Zur Untersuchung des räumlichen Vorstellens. (Research on spatial representation.) *Z. pädag. Psychol.*, 1935, 36, 150-165.—Hische tried the cube test on 14-year-old elementary pupils, students in technical and business schools, and academic students. The results are studied in relation to mental age, previous education, and present vocational training; and the psychological processes involved in the test are analyzed. The problem is too difficult for elementary pupils. The technical group did best, and the influence of special training (practice) was marked. The psychological processes involved are: holding the spatial representation of the whole throughout the test, dependent on continuous concentrated attention; simultaneous distribution of attention among many spatial subdivisions; abstraction, possible only with visualization of the position of the component parts; arithmetical processes. Three-fold attention is necessary: holding the *Aufgabe*; visualizing the position of the parts; and attention to numbers. The tendency to evade is strong, i.e. to use easier processes (flat surfaces, exclusively arithmetical methods). The test is suitable in the selection of applicants over 16 years old for vocations requiring high technical-constructive thought.—M. E. Morse (Baltimore).

4361. Holway, A. H., & Pratt, C. C. The Weber ratio for intensive discrimination. *Psychol. Rev.*, 1936, 43, 322-340.—Results of psychophysical research show the Weber ratio ( $\Delta R/R$ ) to be a specific,

dependent and reproducible function of  $R$  in every particular instance. In all cases, as  $R$  increases,  $\Delta R/R$  decreases and approaches a minimal value. In most cases  $\Delta R/R$  as a function of  $R$  tends to pass through this minimum and then rise. Two important psychophysical factors are discussed: (1) the distinction between  $\Delta R$  as mean j.n.d. and  $\Delta R$  as variation index, and (2) the need for an exact understanding of the relation which may exist between the two types of  $\Delta R$ . The stimulus to sensory intensity is generalized for all sensory mechanisms in terms of the fundamental dimension of the stimulus ( $F$ ), the unit designated the "Fechner." The general properties of  $W$ , the Weber ratio that depends on  $\Delta R$  as mean j.n.d., have been defined for any particular sensory system and for all values of  $F$ .—A. G. Bills (Chicago).

4362. Johnson, T. H. Homonymous hemianopia. Practical points in interpretation, with report of forty-nine cases in which the lesion in the brain was verified. *Arch. Ophthalm., Chicago*, 1936, 15, 604-616.—Giving only relevant statistical data concerning his own series of cases, and including reference to other work, the author justifies the conclusion that homonymous hemianopia may be associated with any lesion affecting the visual system posterior to the optic chiasm. In lesions of the frontal lobe, homonymous hemianopia was incomplete in only 20% of the cases, while defects were incomplete (frequently quadrantic or crescentic) in nearly 75% of the cases where they were associated with temporal lobe lesions and in 66% where associated with lesions of the occipital lobe. Homonymous hemianopic defects are more frequently found associated with lesions of the temporal lobe because such lesions are more frequent than lesions of the occipital lobe, and because only lesions of the posterior part of the frontal are likely to produce such defects. Association of the visual field defect with other symptoms may locate the lesion more definitely; e.g., anosmia (frontal); aphasia (frontal or left temporal in right-handed persons); anomia (temporal); hallucinations of sense and taste (contralateral temporal); visual hallucinations of pictured scenes (temporal) or of flashes of light of spectroscopic intensity (occipital). Central vision is usually retained in homonymous hemianopia until optic atrophy has resulted. Subconscious adjustment to the progressive field defects frequently prevents their early recognition.—M. R. Stoll (Mass. Eye & Ear Infirmary).

4363. Kravkov, S. V. [The action of aural stimuli on flicker fusion.] *Fiziol. Zh. U.S.S.R.*, 1935, 19, 826-834.—Aural stimuli can effectively change the critical frequency of flicker. These changes are different, depending on whether the vision is peripheral or central. After the end of the aural stimulus in peripheral vision there is a period of supernormal increase of the critical frequency of flicker. The author supposes that the increase of critical frequency in central vision is a result of the cumulation of excitation in the central fibers of the eye.—A. Yarmolenko (Leningrad).

4364. Krijanskaya, D. A. [The influence of visual strain on the accommodation and convergence of the eye.] In [The psychophysiology of industrial work]. Leningrad: 1936.—With the aid of the apparatus constructed and the methods applied an entirely distinct and steady character of the changes in position of puncti proximi under the influence of work, common to every person under test, has been discovered. Such regularity in the changes occurred in laboratory conditions as well as directly at the factory (in the trousers- and darning-shops). The approach of puncti proximi is due to a spasmodic condition of the ciliary muscle after strain of vision. The receding of puncti proximi is apparently connected with the decrease of the capacity of the over-fatigued ciliary muscle to a maximum contraction. The greatest changes in puncti proximi and in convergence in the industrial workers occurred toward the dinner interval and at the close of the working day; and the dinner interval restores these functions either partly or in full.—A. Yarmolenko (Leningrad).

4365. Lloyd, R. I. Evolution of perimetry. *Arch. Ophthalm., Chicago*, 1936, 15, 713-732.—The development of perimetry is traced from the earliest mention of the limits of the visual field and differences in function of the different parts of the retina through the application of perimetry in the study of pathological conditions. Mention is made of the investigations of Aubert and Foerster concerning the increase in size of the visual field with increase in size of test object and concerning variations in color sensitivity with different backgrounds. Finally, brief descriptions are given of the perimeters and campimeters which recent instruments have supplanted. An historical bibliography is included.—M. R. Stoll (Mass. Eye & Ear Infirmary).

4366. Marinesco, G., & Copelman, L. Contributions expérimentales aux phénomènes de l'orientation dans l'espace. (Experimental contributions to the phenomena of orientation in space.) *Anal. Psihol.*, 1935, 2, 115-120.—An experimental research concerning rats' orientation in space, which is attributed to tactile, kinesthetic and optical sensation. Another factor should be considered, namely the constitution of the rat. A rat submitted to a normal diet learns to find food in a maze after 10 trials. The same rat submitted to a diet deprived of vitamins runs 35-40 times through the maze without finding the food. The second part of the study deals with Lashley's researches, which are repeated for verification. Lashley's conclusions are verified: (1) Spatial orientation is affected by brain lesions; the effect on behavior is proportional to the lesion. (2) The same effect is obtained by destruction of any part of the cortex. The behavior therefore seems to depend upon the surface of the destroyed brain and not upon anatomic localizations. (3) Simple reflexes remain unaffected even when the whole sensory field is destroyed. (4) Behavior in the maze learned before the operation is forgotten after it. (5) The brain seems to act as a whole.—N. Margineanu (Cluj, Rumania).



4367. Mayou, S. The principles of orthoptic training. *Brit. J. Ophthalmol.*, 1936, 20, 360-374.—R. J. Beitel, Jr. (American Optical Company).

4368. Montorzi, —. La didattica del linguaggio nella scuola dei sordomuti. (Language instruction in the deaf-mute school.) *Rass. Educ. Sordomuti Fonet. biol.*, 1935, 1, 27-33.—G. M. Hirsch (Rome).

4369. Ogasawara, J. [Effect of the phenomenal distance on the  $\beta$ -movement.] *Jap. J. Psychol.*, 1936, 11, 109-122.—In Korte's law concerning the impression of movement,  $\varphi = f\left(\frac{s}{t}\right)$ ,  $s$  is uncertain; it may be assumed to be real distance between two stimuli, distance upon the retina, or phenomenal distance. Under various conditions (distance between two bright spots, their size and brightness and distance of observation being interchanged) the time of interval which produces the optimal movement impression was measured. The results prove that the time of interval increases in proportion to the apparent increase of distance between two spots, but not to their real distance.—R. Kuroda (Keijo).

4370. Padovani, E. Contributo allo studio dell'audizione colorata e al suo valore psicologico, psicoterapeutico e pedagogico. (Contribution to the study of colored hearing and its psychological, psychotherapeutic, and pedagogical value.) *Atti Congr. Soc. ital. Psichiat.*, 1935, 20, 874-877.—G. M. Hirsch (Rome).

4371. Park, G. E. The precision angliometer. *Arch. Ophthalmol., Chicago*, 1936, 15, 703-709.—Describes an instrument designed to permit accurate determination of lateral muscle imbalance, degree of deviation in squint, strength of individual external and internal recti, distance between the "visual centers," and magnitude of the physiological angle, defined as the angle between the optical axis and the visual axis. The "visual center" is defined as a point lying within the eye but fixed with relation to the head, not to the eye, through which the visual axis passes during all horizontal excursions.—M. R. Stoll (Mass. Eye & Ear Infirmary).

4372. Pauli, R. Neuere Untersuchungen zur taktilen Raumwahrnehmungen. (Recent researches on tactile perception of space.) *S. B. Ges. Morph. Physiol. München*, 1934, 43. Pp. 11.—A study of sharp-blunt perception based on a single stimulus from a regularly decreasing area. The scale consisted of 16 cork-tipped surfaces ranging between 0.1 and 54 sq. mm., applied with a constant weight of 35 gms. for 0.1 sec. to the outer side of the thigh. Increasing the stimulation time threefold decreased the thresholds for sharp and blunt to  $\frac{1}{4}$ - $\frac{1}{2}$  of the original. The judgment time was greater than 1 sec., and that for sharp was constantly 0.2 sec. longer than for blunt. These findings indicate a complex perceptual process. The scale of sensation was: undifferentiated sharpness; pure touch; bluntness (not-sharp touch); linear flatness with fronto-parallel reference; two-dimensional impression. These are the simplest forms of tactile perception of space.

The qualities of sensation were: sticking pain signifying sharpness; tickling, particularly associated with pure touch but also with sharpness and bluntness; and pressure. In the latter the area of the stimulating surface was always underestimated.—M. E. Morse (Baltimore).

4373. Preda, G., & Cupcea, S. Contributiuni la studiul experimental al sensibilitatii tactile in corelatiune cu varsta, sexul, inteligenta si abilitatea manuala. (Contributions to the experimental study of tactile sensibility in correlation with age, sex, intelligence and manual ability.) *Romania med.*, 1934, 12, 257-258.—208 subjects were examined in tactile sensibility, by the Schulze apparatus; manual ability, by Moede's apparatus; and general intelligence, by the scale of the Institute of Psychology, University of Cluj. Results: (1) tactile acuity grows with age (growth curves are given); (2) women have better tactile sensibility than men; (3) practice decreases individual differences; (4) intelligence correlates negatively with both tactile sensibility and manual ability. Touch and manual ability correlate .33.—N. Margineanu (Cluj, Rumania).

4374. Quercy, P., & Izans, P. Remarques sur quelques variétés de métésthésies. (Remarks on some varieties of metesthesia.) *J. Psychol. norm. path.*, 1936, 33, 114-123.—The authors define metesthesia as a sensory perception when this perception, first aroused by the presence and action of an object, persists or reappears despite the absence or inaction of the object. They give several examples of these images and think they should be placed somewhere between classical after-images and hallucinations.—R. E. Perl (New York City).

4375. Rasmussen, O. D. Incidence of myopia in China. *Brit. J. Ophthalmol.*, 1936, 20, 350-360.—Sight records of the ancients not being available, the only clue available is the relative percentage of types of spectacles sold. Of the ancient spectacles, about 65% were concave spheres of all values. "Percentages under the modern school must be approached from a different angle, although the figures are remarkably similar. Under pressure of Westernization, the people's attitude toward spectacles is rapidly changing." The following list was compiled from the records of some twenty-five centers of refraction, in a score of the principal cities, and covers nearly 120,000 cases: myopia (simple), 42%; myopia and astigmatism, 16%; myopic astigmatism, 12%; presbyopia, 10%; hyperopia (simple), 8%; hyperopia and astigmatism, 8%; hyperopic astigmatism, 4%. The chief cause for the high incidence of myopia "in the writer's opinion, is the form of education which has existed for two thousand years, intensified by gross abuse of the accommodation-convergence faculty. . . . An important proof of the writer's thesis is the fact that, under modern conditions, where often two and three generations have been schooled by mission or Chinese enterprise, the children requiring lenses reveal a marked diminishing of myopia and a relative increase of hypermetropia."—R. J. Beitel, Jr. (American Optical Company).

4376. Schottlaender, E. *Über Lage- und Formänderungen des negativen Nachbildes.* (On changes in position and form of negative after-images.) *Kwart. psychol.*, 1936, 8, 9-62.—Experimental studies are reported of changes in the position and form of after-images in relation to the configuration of a variable background (screen) upon which the images are projected. Simple and complex (e.g. asymmetrical) figures are projected and the resultant deformations observed by the subjects are recorded.—T. M. Abel (Progressive Education Association).

4377. Shaklee, A. O., Christensen, K., & Kaplan, A. *Action of drugs, nerves and electric current in iris sphincter.* *Proc. Soc. exp. Biol., N. Y.*, 1936, 34, 399-400.—Contractions and relaxation of excised iris sphincter of 46 cats, 2 rabbits, and 2 pigs were observed in response to stimulation with faradic current in the presence of 3 drugs. It is concluded that "the results of electric stimulations before and after the successive applications of a choline ester, atropine and epinephrine seem to lend support to the theory that these drugs and the electric current act solely on receptive substances for the neural hormones." This is said to be in harmony with the chemical theory of nerve transmission.—H. Peak (Randolph-Macon).

4378. Snellen, H. A. *Einige Untersuchungen über das Wever- und Bray-Phänomen.* (An examination of the Wever and Bray phenomenon.) *Acta otolaryng., Stockh.*, 1936, 23, 470-480.—Several detailed experiments were made using the Wever and Bray technique; for instance, single tones and two tones an octave apart were sounded at the same time and the changes in vibrations conducted from the auditory nerve of decerebrated cats were observed. Another experiment gave some evidence for fatigue. The Helmholtz theory of hearing is discussed in relation to the Wever and Bray phenomenon. Bibliography.—M. B. Mitchell (N. Y. A., Concord, N. H.).

[See also abstracts 4337, 4342, 4343, 4412, 4423, 4428, 4430, 4460, 4464, 4482, 4502, 4504, 4524, 4576, 4602, 4619, 4736.]

## FEELING AND EMOTION

4379. Bridges, K. B. *Le développement des émotions chez le jeune enfant.* (The development of emotions in the young child.) *J. Psychol. norm. path.*, 1936, 33, 40-87.—The subjects used in this research were 62 infants at the Montreal Foundling and Baby Hospital, ranging in age from 3 weeks to 2 years, and 56 children of the McGill Nursery School ranging in age from 2 to 5 years. The author used the method of empirical observation of spontaneous reactions of the children in their usual environment. The varieties of reaction which were considered emotional were not only immediately apparent activity, such as tears or urination, but also less immediately apparent reactions, such as digestive, respiratory or circulatory disturbances and changes in tone of voice, expression, bodily movements, etc. Emotions are the products of the environment, but they contain certain specific hereditary elements. The only innate

emotional reaction is general agitation, that is, a group of unorganized visceral and motor responses to an intense stimulation. At about the age of 3 months this general agitation can be divided into two large classes of emotional responses, which the author names suffering and delight. Suffering, in early infancy, is characterized by tension of the muscles, changes in respiration and complexion, trembling and tears. It is caused by sudden or intense sensory stimuli and by restriction of normal movement. Delight is characterized by release of tension or by a normal muscular tonus, gurgling, and free movement. It is produced by gentle sensory stimulation, especially kinesthetic or cutaneous, which is slow enough to permit muscular adjustment and compensatory reactions. Diagrams are presented to show at what ages these emotions can be further subdivided into anger, disgust, range, exultation, affection, etc., and several illustrations of these emotional responses are given.—R. E. Perl (New York City).

4380. Holmes, F. B. *An experimental investigation of a method of overcoming children's fears.* *Child Develpm.*, 1936, 7, 6-30.—"This investigation attempted to discover the adequacy of a method of overcoming fear of a high place and a dark room under experimental conditions. The method was essentially that of directing and aiding the child in learning various ways of coping with the fear situation. It required the child to be an active participant in the procedure. The procedure also included verbal reassurance, gradual familiarization with the fear situation, and a pleasant conclusion to each performance in the form of a game. . . . The method was successful in overcoming the fears of thirteen out of fourteen children who were afraid of entering the dark room"; it was also successful with one of the two children who were afraid to walk along the high board. 17 references are listed.—F. D. McTeer (Wayne University).

4381. Thomaschewski, E. *Die Farbe in der experimentellen Charakterforschung.* (Colors in experimental character study.) *Z. Jugendk.*, 1935, 5, 50-53.—In an experiment in which more than 700 school children aged 4-16 participated, color preference was found to have a consistent relation to social adjustment, mental capacity, special abilities, temperament, and initiative as measured by observation. It is therefore a valuable key to character analysis. The subjects were asked to select from 25 colors the five most liked and the three most disliked. Reliability was measured by a retest after three months. Some of the results were: blue, black and violet signify calm; orange and red, sociability; white, seriousness; black, present depression; orange, erotic tendency; dark green, reserve; light blue in young children signifies nervousness; green and violet, sensitivity; red tones persistently chosen indicate feeble-mindedness or abnormality, but a strong red means health, vigor and joyousness. The harmony between the five colors chosen is also significant. For instance, sharp distinction between the colors shows clear thinking and uprightness, and the order of dark

and light tones indicates a masculine or a feminine principle.—*M. Lee* (Chicago).

[See also abstracts 4407, 4409, 4413.]

#### ATTENTION, MEMORY AND THOUGHT

4382. *De Montpelier, G.* L'inhibition rétroactive et la courbe Skaggs-Robinson. (Retroactive inhibition and the Skaggs-Robinson curve.) *J. Psychol. norm. path.*, 1936, 33, 133-147.—The author reviews the literature on retroactive inhibition and concludes that the predictions of the Skaggs-Robinson curve have been experimentally confirmed. Although there have been partial divergences, particularly in the work of McGeoch and McKinney, Skaggs and Robinson have well described the general behavior of retroactive inhibition. Inhibition is at a maximum for a certain degree of similarity between the two activities; an examination of experimental conditions shows that this maximum appears in the case where, without presenting the same elements in common, the tasks have a maximum degree of qualitative similarity in respect to the operation required.—*R. E. Perl* (New York City).

4383. *Graves, E. A.* The effect of sleep upon retention. *J. exp. Psychol.*, 1936, 19, 316-322.—The purpose of this experiment was to determine the effect of interpolated periods of various lengths upon the retention of nonsense syllables as measured by the percentage savings method, for 24, 48, 72 and 144 hour intervals (1) when the learning is done just before retiring, and (2) when the learning is done in the morning upon awakening. One subject participated in the learning. The results indicate that learning nonsense syllables before sleeping has a beneficial effect upon retention as compared with learning immediately upon awakening for periods of 72, 96 and 144 hours but not for 24 and 48 hours. When the difference in retention between sleeping and waking periods became reliable (from 72 hours on) the relative variability for the waking period became markedly greater than for the sleeping period.—*H. W. Karn* (Pittsburgh).

4384. *Sanford, R. N.* The effects of abstinence from food upon imaginal processes: a preliminary experiment. *J. Psychol.*, 1936, 2, 129-136.—In order to test the hypothesis that imaginal processes, conceived as any active trace of past experience whether it appear as a conscious image or be inferred on the basis of its effects upon behavioral responses, are functions of the needs of the organism, 10 school children were presented individually with words for association and ambiguous pictures for interpretation (thematic apperception) shortly after and immediately before a regular meal. These S's were divided into two groups of 5, and two lists of 24 words and two groups of 10 pictures were presented in opposite sequence so as to cancel any differences in power to provoke food responses. The ratios of food responses (naming foods or meals or consisting of verbs meaning to eat) before and after meals were: 2/1 for the word test, and 2.5/1 for the interpretation of pictures. No individual exceptions occurred. Food responses

were concluded to be dependent upon the strength of the need for food, and further work along this line is promised.—*J. McV. Hunt* (Brown).

4385. *Symonds, P. M.* Education and the psychology of thinking. New York: McGraw-Hill, 1936. Pp. xii + 306. \$2.50.—The greater part of this book is concerned with the analysis of the complex act of thinking, which is regarded as a mosaic or organization of separate abilities. An analysis is made of the following aspects of thought: learning the meaning of a word or term, stating relationships, formulating a question and a definition, selective recall, selecting a basis of comparison, evaluating recall, outlining, generalizing and summarizing, problem solving, explanation, making a decision, criticism and discussion. The third section deals with various operations of thought, some imperfections of analysis, selection, association, generalization and inference. There is a discussion of the methods education can adopt to improve thinking; one chapter deals with thinking about conduct and another with testing the validity of the thought process. A concluding chapter concerns educational research as a methodology of thinking. Each chapter begins with representative problems which provide a basis for discussion and ends with supplementary suggestions and interpretations with particular applications to education.—*P. S. de Q. Cabot* (Simmons).

[See also abstracts 4419, 4511, 4512, 4566, 4586, 4734, 4736.]

#### NERVOUS SYSTEM

4386. *Bodechtel, G.* Anatomie, Physiologie, Pathologie und Klinik der zentralen Anteile des vegetativen Nervensystems. (Anatomy, physiology, pathology and clinic of the central section of the vegetative nervous system.) *Fortschr. Neurol. Psychiat.*, 1936, 8, 175-195.—This article, which concludes a series of investigations on different aspects of the vegetative nervous system, is divided into two parts; the first deals with the medulla oblongata and pons, the second with the spinal cord. Each section includes résumés of important work on the histopathology, anatomy, physiology, animal experimentation, pathological and clinical findings in respect to the particular part of the nervous system being discussed. There is a long bibliography.—*D. S. Oberlin* (Newark, Del.).

4387. *Chappell, M. N., & Pike, F. H.* Summation of stimuli and the neural changes in learning. *Psychol. Rev.*, 1936, 43, 283-307.—Two lines of development in neurophysiology seem to have particular significance for the problem of learning: (1) the changes in the functional capacity of a conduction system, and (2) summation of stimuli. Evidence from observations made by the authors and a number of other investigators supports the theory that the functional capacity of conduction systems is enlarged by use, just as in the case of muscle tissue. The phenomena of summation of stimuli, including the special case of summation at a synapse, of impulses from many converging systems are well supported.



Probably chemical excitants within the neural system can produce summation phenomena as well as peripheral excitations. These facts throw light on the learning process because they explain how a few sources of excitation can acquire the power to initiate a response which originally required a number of sources. It accounts for the conditioned response and for the effects of repetition in practice, though it fails to explain some learning phenomena.—*A. G. Bills* (Chicago).

4388. Feldmann, A. B. Pro vpliv rozlitogo gal-muvannya u zhabu na efekt vid diyannya riznikh podraznikiv. (The influence of generalized inhibition in the frog on the effect produced by certain stimuli.) *Med. exp., Kharkov*, 1936, No. 1, 32-48.—Extending his own and Sechenov's earlier work, the author uses the "insinuation" technique to study further the influence of generalized inhibition, electrically induced, upon the effects of sensory-nerve and cutaneous stimulation. He presents evidence to show that with a given intensity of generalized inhibition there is an inhibition of the effect of stimuli ordinarily evoking response after prolonged summation. This is explained as a modification of the functional properties of the nervous centers in the sense of a diminution of the capacity to retain traces of preceding excitation—for which reason electrical irritants of a certain frequency remain without effect.—*F. S. Keller* (Colgate).

4389. Goldstein, K. The function of the cerebellum from a clinical standpoint. *J. nerv. ment. Dis.*, 1936, 83, 1-12.—The special task of the cerebellum is to support, by co-innervation, the performances of higher levels, namely, the voluntary, purposeful performances which are determined by the whole organism, and automatically to maintain these movements and postures if the situation demands it. Pass-pointing connected with cerebellar lesions is to be found usually only outward and downward, only occasionally inward. Pass-pointing is usually found at the same time both outward and downward; it usually involves the whole half of the body. The cerebellum has the function of supporting adduction and flexion performances. The positive symptoms of cerebellar lesions can be regarded as expressions of this abnormal reactivity of the sub-cerebellar centers. The abnormal hyper-excitability is particularly expressed by abnormal turning of the organism toward the source of the stimulation. The innervation of the primary motor apparatus is disturbed by lack of co-innervation of the cerebellum and by the impossibility of utilizing rightly the peripheral stimuli. Direct cerebellar symptoms are, however, also affected by the phenomena of isolation of the subcerebellar apparatus. Bibliography.—*C. R. Atwell* (Boston Psychopathic Hospital).

4390. Hamilton, J. A. Intelligence and the human brain. *Psychol. Rev.*, 1936, 43, 308-321.—No reliable evidence has been found for a relationship between special or general intelligence and the physical characteristics, e.g., size, weight, etc., of the human brain. Attempts to measure the brain indirectly by cranial

measurements have yielded very low positive correlations (of the order of .05 to .10) with intelligence. It is concluded that individual differences in intelligence are determined either by some physical factor or factors as yet undiscovered or by such a multiplicity of factors as to defy analysis.—*A. G. Bills* (Chicago).

4391. Harlow, H. F., & Settlege, P. H. The effect of application of anesthetic agents on circumscribed motor and sensory areas of the cortex. *J. Psychol.*, 1936, 2, 193-200.—In order to test the feasibility of using anesthetic agents to effect temporary inactivation of localized cortical areas, nupercaine and novocaine in concentrations varying from 1 to 10% were applied with a hypodermic needle or with a piece of filter paper to some part of the motor area of 7 macaques. Novocaine and the filter-paper technique proved more satisfactory, and concentrations of novocaine up to 10% left no residue of functional or morphological injury to nerve tissues and produced marked decrements in excitability to electrical stimulation. Applications of 10% novocaine and 4% butyn on the lateral surface of the occipital lobe were ineffective in abolishing any visual functions. When the visual cortex was temporarily inactivated by freezing, the period of inactivation was longest for the "higher" functions and shortest for the simpler functions.—*J. McV. Hunt* (Brown).

4392. Hepler, O. E., & Simonds, J. P. Effect of hyperthyroidism on sympathetic nervous system. *Proc. Soc. exp. Biol., N. Y.*, 1936, 34, 534-535.—The experiments indicate (1) that 1 cc. of fresh 1:30,000 solution of adrenalin induces about twice as great a rise in blood pressure in 9 normal dogs as in 7 dogs in a state of chronic hyperthyroidism produced by feeding 10 gm. of desiccated thyroid for 9-14 days preceding the experiment; (2) that merely putting a ligature in place for constricting hepatic veins induces an average fall in blood pressure three times as great in hyperthyroid as in normal dogs.—*H. Peak* (Randolph-Macon).

4393. Loomis, A. L., Harvey, E. N., & Hobart, G. Electrical potentials of the human brain. *J. exp. Psychol.*, 1936, 19, 249-279.—Electrical potentials arising in the cerebral cortex were recorded by means of an apparatus which included three amplifiers for three separate recordings. Records were made on paper on an 8-foot drum, thus making possible eight hours of continuous recording. The subjects, including one set of identical twins, ranged in age from 17 days to 74 years. An analysis of the records shows that regular rhythms of potential occur which differ in different individuals and are affected by various conditions of mental activity, by external stimuli, by emotional states, sleep, hypnosis, alcohol and blindness.—*H. W. Karn* (Pittsburgh).

4394. Marchionini, A. Neuere Ergebnisse auf den Grenzgebieten von Dermatologie und Neurologie. (New findings in the neighboring fields of dermatology and neurology.) *Fortschr. Neurol. Psychiat.*, 1936, 8, 219-238.—Numerous publications have appeared recently on these subjects. Among the most important is Pautrier's volume on the nervous system of

the skin. This work includes original contributions as well as critical notations by Pautrier and his followers. Other publications dealing with normal and pathological histology of the nerves of the skin, investigations on blood and other fluids, etiology and pathogenesis, clinical findings and therapy are discussed in the article. Bibliography.—*D. S. Oberlin* (Newark, Del.)

4395. Rydberg, E. Om förlossningstraumatiska skador på centrala nervsystemet hos nyfödda barn. (On birth injuries of the central nervous system of the new-born.) *Hospitalstidende*, 1936, 79, 453-467. —A general critical review of birth injuries, with detailed description of 48 cases observed by the author and followed by him for a period of 3-18 years. The results of the last observation of these children give the following classifications: idiots and imbeciles 16, retarded 10(9), serious after-effects but mentally normal 2, 1 case with 2-3 epileptic seizures but otherwise normal, defects of less serious importance 10, normal 9(8). Comments are given on each of these six groups.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4396. Titeca, J. Physiologie des lobes frontaux. (The physiology of the frontal lobes.) *J. belge Neurol. Psychiat.*, 1936, 36, 245-262.—The author discusses the physiology of the frontal lobes, referring to the various investigators in this field, with a view to elucidating the problem of cerebral localization. Most of the information regarding this subject has been obtained by animal experimentation, but much valuable data can also be gathered from the observation of mental disorders, as lesions of the frontal lobes produce characteristic symptoms. The author believes that each of the three morphologically well defined zones, motor, premotor, and prefrontal, is the seat of definite functions. In the motor zone the stimulation of each area corresponds to the function of a specific muscular region. The premotor zone constitutes an organ for the elaboration and correlation of motor reactions, such as language. The prefrontal zone has the role of integrating cortical functions expressed in attention, memory, and judgment; in brief, all that is subsumed under the word intelligence.—*H. Sys* (Cornell).

4397. Vvedenskij, N. E. Sobranie sočinenij. (Complete works.) Vol. IV. Leningrad: Lenin-grader Staat-Univ. namens A. S. Bubnov, 1935. Pp. 220. Rbl. 6.—This contains the author's studies on parabiosis. The contents are chiefly the following: excitation, inhibition and narcosis; short articles about the stimuli and poisons of nerves; narcosis of nerves; the nature of electrical currents in nerves, and the telephone as an indicator of the neuro-excitation (the last two in French and Russian). The fundamental doctrine of the author is the close connection between excitation and parabiosis and the intimate relation, if not identity, of inhibition and parabiosis. The following are the four states of the nervous substratum: (1) rest, (2) activity, (3) parabiosis, narcosis, inhibition, (4) death. The last three states are united as excitation. The second

state, activity under over-strong stimuli, can go over into the over-excitation parabiosis.—*A. Yarmolenko* (Leningrad).

4398. Weiss, P., & Ruch, T. C. Further observations on the functions of supernumerary fingers in man. *Proc. Soc. exp. Biol.*, N. Y., 1936, 34, 569-570. —The authors report a reexamination of finger movement in a reduplicated hand in which supernumerary fingers 3, 4, and 5 tended to move each one in association with the corresponding normal finger. During an 8 months interval the patient has been attempting to acquire independent use of the homologous fingers. Kymographic records indicate that cortical activity, as expressed by conscious effort and focussed attention, can momentarily abolish association between homologous muscles existing on lower levels of central activity.—*H. Peak* (Randolph-Macon). [See also abstracts 4358, 4378, 4415, 4425, 4430, 4435, 4496, 4532, 4589.]

#### MOTOR PHENOMENA AND ACTION

4399. Borovsky, V., & Kolbanovsky, V. Instinkti, naviki. (The instincts and habits.) (Vol. 1.) Leningrad: Socekis, 1935. Pp. 200.—The collected volume contains 15 articles concerning the formation of habits, their instinctive bases, the role of time and rhythm in the experimental working out of habits, and the ontogenesis and motivation of behavior. Some doctrines of instincts are criticized from the dialectic point of view.—*A. Yarmolenko* (Leningrad).

4400. Campbell, M. The cognitive aspects of motor performances and their bearing on general motor ability. *J. exp. Psychol.*, 1936, 19, 323-333.—In an earlier study the author demonstrated the presence of a general ability across four serial motor performances. Other investigators have obtained low correlations between motor tasks and have therefore denied the existence of a general motor ability. In the present study the previous experiments were repeated and several controls introduced for the purpose of determining to what extent the general ability found is due to the use of a particular sense organ. Analysis of the evidence reveals that the absence of general motor ability is due not so much to the simple difference between performances in sense organ used as to the large difference apparent in the cognitive processes of discrimination necessary for the performances.—*H. W. Karn* (Pittsburgh).

4401. Cheney, R. H. Reaction time behavior after caffeine and coffee consumption. *J. exp. Psychol.*, 1936, 19, 357-369.—Five female subjects possessing equal normal (established normal) reaction time, equal age, height and weight were used in this investigation. Each subject was habituated to one cup of coffee per day prior to the experimental period. By means of Metfessel's psychodimeter the reaction time of each subject was studied under normal, caffeine-treated, coffee-treated, and capsulated starch control conditions. Results show that both caffeine (3.3 to 3.6 mgms/kgm) and the equivalent quantity in black coffee reduce the reaction time to the maximum extent of 8% and 4% respectively. Some

reduction in reaction time is maintained for at least a 3-hour period. The caffeine alkaloid was more effective than the coffee beverage except during the first half hour, when the reverse order was observed. The most effective period was 1½ to 2 hours after treatment.—H. W. Karn (Pittsburgh).

4402. Dybowski, M. *Comment former la volonté.* (How to form the will.) *Kwart. psychol.*, 1936, 8, 63-88.—Progress in the development of volition was estimated by finding out degrees of activity, including effort and ways of carrying out activities, among individuals who were examined over a period of years.—T. M. Abel (Progressive Education Association).

4403. Frank, C. *L'immunità acquistata mediante l'educazione psichica integrale.* (Immunity acquired by means of an integral psychic conditioning.) Rome: Tinto, 1935. Pp. 119. L. 6.—In accordance with modern opinions on immunology, whereby the central nervous system directs and presides over all immunizing processes, Frank gives his own cortical theory on immunity and anaphylaxis and his method of psychological training of the whole personality. This procedure should immunize the individual against functional and organic disorders, including toxic, infectious, parasitic, and tumor conditions (particularly cancerous conditions).—G. M. Hirsch (Rome).

4404. Furuhjelm, L., Hortling, H., & Renqvist, Y. *Über die Latenzzeiten verschiedener Spannungsgrade (Überschwelleneinheiten) des Muskels.* (On the latent time in different degrees of tension—supraliminal units—of muscle.) *Shand. Arch. Physiol.*, 1934, 70, 88-101.—The tension of the contraction of the gastrocnemius muscle of the frog excited directly or by means of the sciatic nerve by known voltage was registered photographically. Following the all-or-none law, each supplementary increase in tension represents the response of a given number of fibers plus some more; the retardation in the work of the less sensitive fibers increases as a function of this lesser sensitivity. There is a reduction in the latency with the intensity of stimulation for each group of elements; the range of the reduction increases with the decreasing sensitivity of the fibers activated.—(Courtesy *Année psychol.*)

4405. Hall, A. J. *Some observations on the acts of closing and opening the eyes.* *Brit. J. Ophthalmol.*, 1936, 20, 257-295.—This paper deals with (1) the varieties of closure of the eyelids; (2) the positions and movements of the eyes in sleep and during sleep at different observations, in different individuals (adults, children, new-born infants); (3) behavior of the eyeballs during and after closure of the lids; (4) changes in position of eyes in voluntary closure of lids; (5) the sequence of events in closing and opening the eyes; (6) the sequence of events in the act of blinking, reflex or spontaneous; (7) voluntary closure of rest with continuation of eye movements; (8) closure of one eye—winking; (9) the position of rest. There are photographic illustrations.—R. J. Beitel, Jr. (American Optical Company).

4406. Hilgard, E. R. *The nature of the conditioned response. I. The case for and against stimulus*

*substitution.* *Psychol. Rev.*, 1936, 43, 366-385.—Theories of conditioning fall into two types: (1) those which attempt to explain the facts of conditioning, and (2) those attempting to deduce other types of behavior, such as familiar forms of learning, from the facts of conditioning. The first are called theories of conditioning; the second, theories of learning (etc.) based on conditioning. In working with the concept of conditioning, some authors have conceived of it in terms of stimulus substitution, while others, mainly critics, have attempted to view the facts organismically. The stimulus-substitution formula is given support by many descriptive facts of conditioning, including some which are supposed to contradict it, such as the change in latent time, amplitude and some kinds of configurational change of the conditioned response. But other kinds of configurational change, such as those involved in conditioned breathing, are opposed to it. Neither does it explain the fact that succession of stimuli is more favorable than simultaneity, nor the tendency toward extinction of conditioned responses when not reinforced.—A. G. Bills (Chicago).

4407. Hunt, W. A. *Studies of the startle pattern. II. Bodily pattern.* *J. Psychol.*, 1936, 2, 207-213.—

The startle reactions to a revolver shot of 16 subjects were photographed against a black background which included a clock and a signal marker connected with the revolver. Cameras ran at 64 frames a second. Levers, actuated by strings attached between the shoulder blades and at the back of each knee, etc., also photographed, served as accurate indicators of specific bodily movements. The results confirmed those reported by Strauss and those of a preliminary investigation by Hunt and Landis, showing the startle response to consist of blinking, forward movement of the head, a characteristic facial pattern, raising and drawing forward of the shoulders, abduction of the upper arms, bending of the elbows, pronation of the lower arms, closing of the hands, forward movement of the trunk, contraction of the abdomen, and bending of the knees. In further investigation with these and other subjects, habituation to a series of stimuli at 2-minute intervals was of varied rapidity. Awareness of the procedure had no effect on the pattern, nor could it be eliminated voluntarily. The startle pattern was unaffected by instructions to tense the body, but was apparently facilitated by simultaneous light and shock stimuli, and by instructions "try to jump."—J. McV. Hunt (Brown).

4408. Hunt, W. A., & Landis, C. *The overt behavior pattern in startle.* *J. exp. Psychol.*, 1936, 19, 309-315.—It was the purpose of this study to check findings previously reported by Strauss to the effect that there is definite overt behavior pattern in the adult human occurring as a response to a sudden shot stimulus. Subjects were photographed with a motion picture camera. In the analysis of the records the pictures were projected as stills. The judges worked independently and at different times. In general, Strauss' claim was verified. The pattern consists of shutting the eyes and distortion of the



features, a forward movement of the head, a raising and drawing forward of the shoulders, abduction, forward elevation, and inner rotation of the upper arms, bending of the elbows, pronation of the forearms, claspings of the hands, contraction of the abdomen, forward movement of the trunk, bending of the legs at the hips and knees, and random foot movements. Not all of these elements may be present in any one reaction, and the extent of their appearance is not constant. Strauss' further claims of symmetry, the absence of opposed responses, and no movements of distal parts without movement of proximal ones were shown to have exceptions.—*H. W. Karn* (Pittsburgh).

4409. **Hunt, W. A., & Landis, C.** Studies of the startle pattern. I. Introduction. *J. Psychol.*, 1936, 2, 201-205.—Introducing their studies of the startle reaction with ultra-rapid cinematographic techniques, these investigators describe the confusion extant in the psychology of emotion. "What is needed is a technique of *unscrambling*, some method of untangling and isolating single variables in a complex pattern." Recognition of this need is indicated by an increasing tendency to subject data to intricate statistical analysis, but the same end may also be attained by further developments in apparatus, especially for emotion with the ultra-rapid cinematograph. For preliminary classification, 4 types of emotional response are given: (1) an affective response—primitive bodily attitudes of acceptance or rejection, (2) an emotional response—primarily autonomic, more specific and more highly differentiated, (3) social responses—complicated by cultural accretions, and (4) specific responses—learned responses by a specific individual for specific stimuli. Inasmuch as the simplest and the initiating element in many varieties of emotion is startle, the startle pattern is considered to be of first importance in the analysis of emotional behavior.—*J. McV. Hunt* (Brown).

4410. **Ionasiu, L., Lungu, C., & Cupcea, S.** Contributiuni la problema timpului de reactiune psihomotorică. (Contributions to the problem of reaction time.) *Bul. Spital. Boli mint. nerv. Sibiu*, 1936, 47-51.—An experimental research concerning the reaction-time of Rumanians and Jews. The average reaction time of Rumanians is 181  $\sigma$  for men and 202 for women. In the case of Jews it is 180 for men and 276 for women. The results are compared with those obtained by others and the following conclusions are obtained: Rumanians represent an intermediate position between European and Asiatic peoples in reaction time; women have longer reaction times than men; the difference between men and women is greater in Asiatic peoples. The subjects were 134 Rumanian men and 42 women 17-25 years old; and 24 Jewish men and 15 women of the same age. The score is computed from 10 reaction times.—*N. Margineanu* (Cluj, Rumania).

4411. **Kirzon, M. V.** [On the physiological interpretations of the muscular tremor and the methods of analysis of the tremogram.] In [*The psycho-*

*physiology of industrial work*]. Leningrad: 1936. Pp. 213-223.—Tremor can be regarded as an oscillating tonus, created by groups of impulses sent from the nerve centers which serve as a background, broken by intervals of a lesser or greater duration, and by groups of impulses which crowd in and produce short tetanic convulsions. The course of the tremor curve can be estimated from its basic components, which are as follows: (1) the rhythm and amplitude of comparatively frequent oscillations (2-4 per second) or waves of the first kind; (2) grouping thereof in one or another course, waves of the second kind; (3) correlation between the rhythm and the degree of regularity of oscillations; (4) character of sustaining a general level of the curve and the frequency of the falls thereof. These components are, apparently, the final mechanical expression of the central rhythm, constituting both tonic and tetanic innervation and altering in accordance with the current state and conditions of the activity of the motor apparatus. The estimation of the qualitative changes of the tremogram, in a number of cases, apparently enables one to judge of the physiological condition of the motor apparatus as a whole and of the condition of the central apparatus in particular, and of their capacity to secure the necessary coordination and position for the given working action.—*A. Yarmolenko* (Leningrad).

4412. **Kurtz, J. I.** Photographing the eye movements during reading—an ophthalmographic technic. *Amer. J. Optom.*, 1936, 13, 176-185.—The author emphasizes the importance of the objective clinical records obtained for the study of the reading habit and ocular functions.—*R. J. Beitel, Jr.* (American Optical Company).

4413. **Landis, C., & Hunt, W. A.** Studies of the startle pattern. III. Facial pattern. *J. Psychol.*, 1936, 2, 215-219.—Photographing the startle reactions to a revolver shot of 29 subjects at 64 frames a second revealed a regular facial pattern in these reactions. The pattern included closing the eyes, head movement, movement of the risorius muscle extending the mouth as in a "grin," and involvement of the sternomastoid, trapezius, and platysma muscles in the neck. The extent of the pattern varied with individuals and with habituation in the same individuals. The pattern appeared in both naïve and experienced subjects; was not subject to voluntary inhibition; was not affected by general bodily tension; but was possibly facilitated by simultaneous light and electrical stimuli and by trying to jump.—*J. McV. Hunt* (Brown).

4414. **Pauli, R.** Untersuchungen zur Arbeitskurve. (Studies on the work curve.) *Ber. Kong. dtsh. Ges. Psychol. Tübingen*, 1934, 14, 301-302.—Comments on the accompanying graphs of work curves (continuous addition) under the following conditions: with no knowledge of the amount or duration of the work (the norm); with assurance of short duration (20 min.); with previous knowledge of a considerable duration (1 hr.); with knowledge of an amount of work requiring several hours; involving

deception, by creating the expectation of short duration but actually requiring 1 hr. A short, known duration gave the best results; an excessive amount of work, especially when combined with deception, gave the poorest. Correlations between partial and total outputs were strongly positive; between total output and form of curve and number of mistakes were slight or negative.—*M. E. Morse* (Baltimore).

4415. Pinkston, J. O., Partington, P. F., & Rosenblueth, A. A further study of reflex changes of blood pressure in completely sympathectomized animals. *Amer. J. Physiol.*, 1936, 115, 711-719.—In previous studies it has been suggested that the dilator fibers in the dorsal spinal roots are probably the efferent paths for the blood-pressure changes from central stimulation of vagus and depressor, or somatic afferents, depressor points on the floor of the 4th ventricle, and struggle. Brouha and Heymans, on the other hand, have concluded that the fall of blood pressure in struggle is produced by metabolites ( $\text{CO}_2$ ). They also reported differences between cats and dogs. The present study was intended to decide between these two points. Completely sympathectomized cats and dogs were employed with dial, chloralose, urethane, or ether. The blood pressure was recorded from the carotid or femoral artery. Vagi were cut in the neck and adrenals were ligated to prevent regrowth of innervation. The central ends of cut afferents were stimulated with induction shocks. Respiration was also recorded. Uniform heart rate on stimulation was the criterion for elimination of regrowth of innervation to the adrenals. In general results were constant with the different anesthetics. Stimulation of the afferent nerves produced blood-pressure changes in both dogs and cats which were not the results of breathing or reflex movements, thus confirming previous studies. Asphyxia produced prompt decrease of blood pressure which was marked in cats and slight in dogs, thus confirming Bacq, Brouha, and Heymans on this point. No evidence was found for the sinus reflexes claimed by the latter authors, and the question is raised whether their neglect of controls for regrowth to the adrenals may not account for their results. It is held that the present results are consistent with the posterior root dilator interpretation. The difference between dogs and cats is attributed to greater activation of vasodilator nerves in the latter. The use of percarine "sections" of the spinal cord used by the above authors is held to be questionable, and their argument against non-sympathetic dilators therefore inconclusive.—*T. W. Forbes* (N. Y. Psychiatric Institute).

4416. Poindexter, A. The factor of repetition in learning how to type. *Kentucky Person. Bull.*, 1936 (June), No. 17, 3-4.—The problem in this experiment was to test the alpha, beta and gamma postulates of learning by applying them to the acquisition of typing. One of three groups of twelve inexperienced students proceeded to learn typing according to each of the above theories. The results show that in the acquisition of typing repeating the correct response

five times (alpha postulate) is more efficacious than repeating the incorrect response (beta postulate) a similar number of times.—*J. Brockwell* (Brown).

4417. Poliakova, M. G. [On the influence of work on tremor.] In [*The psychophysiology of industrial work*]. Leningrad: 1936. Pp. 196-212.—With the aid of Kudriavtsev's lever-apparatus records were made of tremor of the right forefinger, systematic observations being made: (1) under different conditions during rest; (2) after static and dynamic work of different segments of the right arm (the forefinger, the middle finger, the hand, the forearm and the whole arm, right or left); also (3) recovery was traced by repeated records made during 6-8 minutes after work. Curves of tremor "during rest" reveal individual differences in the general length of the curve, the rhythm, and the character of correlations between the basic oscillations. After dynamic work the length of the tremogram increases. The peculiarity of tremor after static work is an evidently expressed irregularity of the curve. The recovery consists in a decrease of the length of the tremogram and in a return to the type of curve characteristic of the state of "rest." Repeated short (30 seconds) records of tremor with intervals of  $1\frac{1}{2}$  minutes show noticeable and growing changes of tremor. Records of tremor without visual control show a greater or smaller break of the level of the curve with an extraordinary stretched period, but do not break the basic character of the curve for the given subject. After concentrating the attention on solving simple problems (mental work) tremor shows changes reminding one of those which occur after dynamic work, but which are less intense.—*A. Yarmolenko* (Leningrad).

4418. Ulianov, P. N., & Sizov, M. J. [Influence of radiation on school children. II. The change of the sensibility-threshold of sensory organs under the action of radiation.] *Sovetsk. Pediat.*, 1935, No. 6, 68-75.—The activation of mental work ability of pupils under the influence of radiant energy can be explained by changes of the central nervous system provoked by radiation.—*A. Yarmolenko* (Leningrad).

4419. Van Tilborg, P. W. The retention of mental and finger maze habits. *J. exp. Psychol.*, 1936, 19, 334-341.—The author presents data on the retention of finger and mental maze habits which he interprets as supporting the contention that verbal habits are retained as well as are non-verbal ones, and that there is perhaps no difference in the degree of retention of the two kinds of habits when original learning as judged by common criteria has been equal.—*H. W. Karn* (Pittsburgh).

4420. Weigand, E. Analyse der Handgeschicklichkeit. (Analysis of manual skill.) Würzburg: Gauverlag Mainfranken, 1936. Pp. 45.—A doctoral thesis from the laboratory of Karl Marbe. A study of complex problems such as stringing beads, winding a string around pegs on a board, bending wires into prescribed model figures, and the free-hand pouring of three peas from a beaker into each of six vertically supported test tubes. The specific skills involved were analyzed by retesting the subjects in various

details as presented in the form of simple replicas and analogous tests. These involved perception of length, steadiness, memory for forms, mechanical insight and ingenuity, etc. Small groups of school boys varying in number (17 to 27) and in age (11 to 12, 12 to 13, and 12 to 14) served as the subjects. Many rank correlations are presented. The few references are largely limited to the Würzburg studies.—*O. N. de Weerd* (Beloit).

**4421. Wigert, V. Om kastration som terapeutiskt ingrepp vid sexuell abnormitet.** (On castration as a therapeutic measure in sexual abnormality.) *Svenska Läkartidn.*, 1936, 33, 585-597.—This is a lecture given at the 1934 annual meeting of the section for psychiatry and neurology of the Swedish Medical Society. The writer discusses, on the basis of available literature, the advisability and consequences of castration in adults having abnormal sexual tendencies, such as homosexuality. He presents two detailed cases from his own practice in Stockholm, one of a man 33 years of age castrated as a therapeutic measure against homosexuality, and the other castrated therapeutically for sexual crimes against children. Five titles are given in the bibliography.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

**4422. Woodrow, H. The measurement of difficulty.** *Psychol. Rev.*, 1936, 43, 341-365.—Through variations in number and spatial separation, five widely different degrees of difficulty were given to the task of naming letters presented tachistoscopically for 0.1 sec. Sums were obtained from 168 university students tested individually under each of the five sets of conditions, whose difficulty was then determined by two different methods. One yields a measure of difference in terms of the standard deviation of the difficulty of the task performance under one set of conditions. The other assumes that the relation between the average percent correct score and the difficulty of the conditions may be represented by the normal distribution curve, whose ordinates indicate the average percentage correct scores and whose abscissae indicate the inverse of the difficulty of the conditions resulting in those average scores. The two methods gave results in substantial agreement. A third method usable under certain conditions is described. All three may be applied to the scaling either of difficulty or of ability.—*A. G. Bills* (Chicago).

[See also abstracts 4338, 4357, 4377, 4387, 4394, 4423, 4427, 4429, 4445, 4453, 4473, 4504, 4554, 4577, 4600, 4612, 4613, 4618, 4685, 4703, 4725, 4734, 4739.]

#### PLANT AND ANIMAL BEHAVIOR

**4423. Allen, W. F. Studies on the level of anesthesia for the olfactory and trigeminal respiratory reflexes in dogs and rabbits.** *Amer. J. Physiol.*, 1936, 115, 579-587.—This study grew from inhalation tests on dogs which were to be used for conditioned smell reflexes. Preliminary tests showed that moderate barbitol abolished all such responses. In the present study ether, morphine, sodium amylal,

dial, nembutal, and barbital sodium are used intraperitoneally. Thoracic respiration was recorded by tambour and an empty bottle was used for control. Olfactory respiratory reflexes from lavender, anise, and cloves were abolished during the first stage of anesthesia in dogs and early in the third stage with rabbits (ether, morphine, and 4 barbiturates). The trigeminal reflex from chloroform was obliterated in the third stage in both animals. It is suggested that although ether and morphine show cortical depression characteristics, there is a difference of opinion as to barbiturates, one group favoring cortical and another diencephalic action. It is pointed out that the well-known finding of Keeser and Keeser that barbital remains in the thalamus and corpus striatum does not necessarily prove this to be the site of action, the alternative being that it used up at its site of action in the cortex. This interpretation would fit Pavlov's theory of sleep. Furthermore, the site of action of the conditioned response may be variously located, and it is therefore thought unwise to attempt an explanation as to why the olfactory respiratory reflexes disappear so early in dogs and so late in rabbits.—*T. W. Forbes* (N. Y. Psychiatric Institute).

**4424. [Anon.] The British institute for the study of animal behavior.** *Science*, 1936, 83, 590-591.—"The institute intends to act as a clearing-house for information regarding work that is being done upon animal behavior in all its aspects and to bring together for the discussion of their problems field and laboratory workers. It is hoped to issue to members a quarterly bulletin in which will be provided summaries of and references to the chief work being done in the various branches of the subject." The officers of the society are listed.—*R. Goldman* (Worcester State Hospital).

**4425. Corey, E. L. Development of the fetal rat following electrocautery of the brain.** *Amer. J. Physiol.*, 1936, 115, 599-603.—In a previous paper it was reported that brain cautery of fetal rats resulted in a 10% decrease in weight and crown-rump length (70 fetuses at different stages of development). The present report includes these and adds others in which the stage of development was as constant as possible. 6 litters were operated on the 16th day and 35 litters on the 17th day, all being removed at term on the 21st day. The litters averaged 8.7 rats per litter. 10 to 75% of the brain tissue was destroyed, and 55% of the fetuses were recovered alive. This survival is noteworthy and argues for absence or hypofunction of higher centers in the fetus. It is not, however, surprising when the dependence on material circulation is considered. The experimental animals showed a change in gross appearance, consisting of heavy neck and jaws and weaker and more sluggish movements. They were also smaller in weight and length by 12 and 9% respectively. Activity and development were not correlated with amount and location of destruction. Other corroborating studies are cited.—*T. W. Forbes* (N. Y. Psychiatric Institute).

**4426. Crawford, C. S. Prisoners of darkness.** *Sci. Mon.*, N. Y., 1936, 42, 555-560.—Apparent



explanations of nocturnal habits have been offered in terms of sensitivity to certain ranges of intensity of light, to the increased humidity, lowered air temperature, reduced air motion and decreased rate of evaporation which characterize the night. Animals that possess these habits find advantages in the avoidance of natural enemies, easier location of preferred food, successful avoidance of evaporation from the body surface, and better conditions for communication. Much uncertainty is encountered when an attempt is made to determine the adaptations exhibited by groups active at night. Differences in sense organs such as exist between nocturnal and daytime forms of close relationship are differences of degree rather than of kind. The senses of smell, taste, touch, temperature and hearing are important, together with light production and the sense of sight. —O. P. Lester (Buffalo).

4427. De Montpellier, G. *Le transfert des effets de l'exercice dans l'apprentissage animal.* (The transfer of the effects of training in the learning animal.) *Rev. belge Pédag.*, 1935-1936, 17, 11-13; 86-87; 151-154; 208-213.—The author reviews the researches performed on this subject, giving results and tentative conclusions with particular attention to the fact that positive transfer very often seems to possess a general character, i.e., that the identical factor in the two situations can be reduced simply to "an adaptation to the kind of task or to a connection existing between certain stimuli and certain responses." The thing which is transferred is not an association or a succession of elementary associations but rather an "attitude" of response, a way of seeking the same kind of solution for different problems.—R. Nihard (Liège).

4428. Farkas, B. *Zur Kenntnis des Hörvermögens und des Gehörorgans der Fische.* (Data on the auditory capacity and the organs of hearing of fish.) *Acta oto-laryng.*, *Stockh.*, 1936, 23, 499-532.—Several species of fish were conditioned so that they would go to a food box when a certain tone was sounded. The auditory stimuli were controlled from a room adjoining the aquarium. The fish could thus be observed without seeing the experimenter. The auditory stimuli consisted of a horn placed above the aquarium and a radio transmitter touching the water. The guppy, a tropical fish, did not react to as long a range of vibrations as the other fish. It differs anatomically from the others in that it lacks the three auditory bones. The fish reacted positively to the Budapest church clock, whose tone is within the range of optimal perception. They also reacted to radio orchestral music when the tones were low, but not when they were high. Young guppies reacted to higher tones than older ones. The fish seemed to have some sense of time, for they swam to the feeding box about eleven o'clock after being fed at the sound of the church clock. The fish reacted more strongly when not fed so frequently. Extraneous stimuli disturbed their conditioned reactions. Bibliography of 66 titles.—M. B. Mitchell (N. Y. A., Concord, N. H.).

4429. Hunter, W. S. *Gradients in the establishment and extinction of conditioned locomotor responses to serial stimulation in the rat.* *Kwart. psychol.*, 1936, 8, 1-8.—The author discusses various experiments dealing with conditioning the rat's locomotor responses under conditions where 4 or 5 stimuli are successively presented at each trial (a series of buzzer sounds followed or not by an electric shock). Conditions are shown under which (1) conditioned responses are more likely to be formed, (2) response gradients are more likely to appear, and (3) extinction of responses takes place. From the theoretical point of view this work is important because of its relation to the general problem of the law of effect in learning and because of its relation to the work on the backward elimination of errors in the maze.—T. M. Abel (Progressive Education Association).

4430. Klüver, H. *An analysis of the effects of the removal of the occipital lobes in monkeys.* *J. Psychol.*, 1936, 2, 49-61.—It is pointed out that in a comprehensive study of visual mechanisms it is necessary to determine the nature of the optically induced behavior and the stimulus characteristics upon which this behavior depends. But this behavior depends upon internal behavior as well as upon the organization of the visual field, so information about the visual system in a case of cortical destruction cannot be obtained simply by subtracting defects from the visual capacities of the normal animal. Neither may the so-called "higher" optical functions be excluded from investigation. Experimental results from 3 macaques in which an attempt was made to remove the entire visual cortex in a one-stage bilateral occipital lobectomy showed that, among reflexes, both the pupillary and the lid closure to light remained intact, while winking from threatening gestures, convergence, and turning toward source of illumination were not observed. By the use of a technique in which the response consisted in pulling in food without light and refraining when light was introduced, it was shown that the animals could make brightness discriminations which depended primarily upon differences in the quantity of luminous flux entering the eyes. Blue light was more effective than longer wave lengths, and ultraviolet light brought forth definite reactions. The evidence indicated that discriminations based upon direction or position were impossible.—J. McV. Hunt (Brown).

4431. Magdsick, K. M. *The curve of retention of an incompletely learned problem in albino rats at various age levels.* *J. Psychol.*, 1936, 2, 25-48.—In order to determine the relationship between age of subject and the presence of an initial rise (reminiscence) in the learning curve preceding the more or less negatively accelerated section (forgetting), several groups of rats at three age-levels (30 days, 150 days, and 300 days) were made to master a maze problem at varying intervals (1 hour, 1 day, 1 week, and 2 weeks) after partial learning. Retention was measured in terms of savings resulting from the partial learning after these several intervals as com-

pared to mastery of the problem immediately after partial learning. The graphical picture of the retention of partially learned material is consistent in general characteristics for all three ages. An initial rise reaches its peak at the interval of 1 hour and extends in decreasing degrees through 1 week. At the end of 2 weeks the curve shows a drop to a point below that level obtained when complete mastery follows immediately after partial learning. Reminiscence, therefore, is present in adult and young albino rats for intervals of an hour through a period as long as 1 week.—*J. McV. Hunt (Brown)*.

4432. Mayorov, F. P. [Data for the comparative investigation of the higher nervous activity of higher and inferior apes.] *Fiziol. Zh. U.S.S.R.*, 1935, 19, 781-803.—Comparing the data on the formation of conditioned reflexes in anthropoid apes and baboons, the author finds that in anthropoid apes the conditioned reflexes are formed more quickly; this applies to both positive and negative (inhibitive) reflexes. Delayed inhibition was also shown in less time in anthropoid apes. Positive induction at very short intervals was observed only in the orang-utan. Concentrated inhibition is also developed in the higher apes.—*A. Yarmolenko (Leningrad)*.

4433. Roeder, K. D. Raising the praying mantis for experimental purposes. *Science*, 1936, 83, 582-583.—The species *Mantis religiosa* is usable for investigations on vision and the functions of various ganglia. The general structure of the insect is discussed and the types of problems in which it might be used are suggested. Details of raising the insect from the egg to the adult stages are given.—*R. Goldman (Worcester State Hospital)*.

4434. Rozengart, V. I. Vpliv treniyuvannya na vmist glikogenu v m'yazakh krolikiv golubiv ta kurei. (The effect of training upon the glycogen content in muscles of pigeons, rabbits and hens.) *Méd. exp., Kharkov*, 1936, No. 3, 47-52.—After daily excitation, with an induced current, of a white muscle in the rabbit and the hen, and a red muscle in the pigeon—for a period of 20 to 80 days—the author used Pflüger's method to determine the glycogen content in the respective muscles. The findings indicated that the results of training were different in the three species: augmentation of glycogen content was greatest in rabbits, much less in pigeons, and least in hens.—*F. S. Keller (Colgate)*.

4435. Sellheim, A. P. Une tumeur cérébrale chez un singe. (Cerebral tumor in a monkey.) *J. belge Neurol. Psychiat.*, 1936, 36, 240-241.—The author describes briefly the symptoms of a behavior disorder with convulsions and states of excitation observed in a four-year-old monkey. The animal died two years later and upon autopsy a tumor (glio-sarcoma) was found in the right occipital lobe.—*H. Syz (Cornell)*.

4436. Verlaïne, L. Le psychisme et ses degrés chez les animaux. (Psychism and its stages in animals.) *Ann. Soc. zool. Belg.*, 1934, 65, 67-86.—The author recapitulates and further develops his theories, based on his own researches and those of his

students on insects, birds, and macaques. He endeavors to show that, if natural history is studied (that is, if the genealogy of behavior is tabulated), psychism ("the faculty which every animal seems to possess to choose successively from its own movements and the factors of its environment those means which are more and more advantageous and economical for attaining the ends which are indispensable for the realization of its destiny") can be reduced to a primordial and fundamental process of generalization, of which sensation, perception, ideas, instinct, and intelligence are only different aspects. This study of natural history reveals a genealogy of intelligence which entirely reverses the system of psychology as previously given.—*R. Nihard (Liège)*.

4437. Washburn, M. F. *The animal mind*. (4th ed.) New York: Macmillan, 1936. Pp. xii + 536. \$3.50.—"The principal change in the attitude of investigators of animal behavior since the third edition of this work appeared is the decay of behaviorism as an interpretation and the revival of animal psychology. The conclusions drawn from experiments are now expressed in subjective terms. Undoubtedly one cause of this change is the rise of the configurational school. But extreme behaviorism, which ignored the existence of all qualitative differences in sensations, would not have long endured." Hence the fundamental method of approach is unchanged. The only changes in this edition are (1) inclusion of recent work to bring discussions up to date; (2) the addition of a chapter on higher mental processes, discussing the delayed reaction, double alternation temporal maze, and the like; and (3) inclusion of a chapter dealing with affective factors in the animal mind—drives, incentives and emotions. The other chapters concern the topics of the earlier edition. The bibliographic citations have increased from 1135 to 1683.—*N. L. Munn (Peabody)*.

4438. Weigl, E. Raporturi social-psihologice in lumea animalelor. (Social-psychological relations in animals.) *Anal. Psihol.*, 1935, 2, 121-126.—A review of social-psychological researches with animals performed by Revesz, Katz and Schjelderup, and a discussion on the applications of the conclusions of these researches to human society.—*N. Margineanu (Cluj, Rumania)*.

4439. Wolfe, J. B. Effectiveness of token rewards for chimpanzees. *Comp. Psychol. Monogr.*, 1936, 12, Pp. 72.—Poker chips were found to have a reward value equivalent to food, for which, after a period of training in which they were used to obtain food from a vender, they acted as substitutes. The animals discriminated between poker chips having a food reward value and those having no such value. In a discrimination situation the animals came to select, of two chips, that having twice the food-getting value of the other. The tokens effectively induced work in delayed-reward situations, provided there was not too long a delay between insertion of the chip in a vender and appearance of the food. Very effective was the situation in which the animals secured a token which they later exchanged for food. When

work was done for a given time and then rewarded in proportion to its amount, grapes and tokens were equally effective incentives. Tokens elicited competitive behavior comparable with that elicited by food. A token appropriate to a hunger or a thirst need could be selected. Many similar observations are included in the study.—*N. L. Munn* (Peabody).

[See also abstracts 4377, 4388, 4415.]

### EVOLUTION AND HEREDITY

4440. Battara, P. *Fattori psicologici e morali di denatalità*. (Psychological and moral factors involved in the falling birth rate.) Florence: Le Monnier, 1935. Pp. 126. L. 12.—The author discusses briefly the different theories and materialistic and psychological tendencies which explain the demographic changes and examines the influence of the psychological factors on the procreative functions.—*G. M. Hirsch* (Rome).

4441. Hartge, M. *Eine graphologische Untersuchung von Handschriften eineiiger und zweieiiger Zwillinge*. (Graphological study of monozygotic and dizygotic twins.) *Z. angew. Psychol.*, 1936, 50, 129-148.—Using 15 pairs of each kind of twins, somewhat greater resemblance was found in the handwriting of the monozygotic twins. This was fairly consistent, but of no diagnostic value in individual cases.—*H. D. Spoerl* (American International College).

4442. Kollarits, J. *Esquisse biologique et psychologique de l'évolution*. (Biological and psychological outline of evolution.) *Arch. Psychol.*, Geneva, 1935, 25, 60-76.—The author presents his conception of evolution, based essentially upon the ideas advanced by C. v. Monakow, applied first to the individual, then to the higher entities, such as the family, classes, nation, and humanity, and finally to the supreme unity, the Cosmos-God.—*M. R. Lambercier* (Geneva).

4443. Skeels, H. M. *The relation of the foster home environment to the mental development of children placed in infancy*. *Child Develpm.*, 1936, 7, 1-5.—This study is based upon 73 children who were placed in foster homes before they were six months of age, and who have been in the foster homes from one to five years. The Kuhlmann and Stanford revisions of the Binet were used as the measures of intelligence. Histories of both true and foster parents, including educational attainment, occupational status, and economic security were evaluated. "(1) The mean level of intelligence of these children is higher than would be expected for children coming from the educational, socio-economic, and occupational level of the true parents; (2) no relationship appeared between the intelligence of true mothers and that of the children; (3) judging from the few cases available at the older preschool ages, a relationship between children's IQ's and foster fathers' occupational status seems to be present as the age of the child increases."—*W. McTeer* (Wayne University).

[See also abstracts 4467, 4517.]

### SPECIAL MENTAL CONDITIONS

4444. Belaval, J. Y. *A propos du rêve de Maury guillotiné*. (About Maury's dream of being guillotined.) *J. Psychol. norm. path.*, 1936, 33, 124-130.—Maury's dream was responsible for the hypothesis that thought processes are speeded up during dreams. The author gives examples and reasoning to disprove this.—*R. E. Perl* (New York City).

4445. Bibring, E. *Zur Entwicklung und Problematik der Triebtheorie*. (The development and problems of the instinct theory.) *Imago, Lps.*, 1936, 22, 147-176.—Instincts are functions of the vital sphere and a goal; their gratification occurs in terms of their origin. Conflict of instincts introduces their object as a determining criterion, and in this stage of the theory, instincts appear to be manifestations of one common force. The third stage concerns the difficulty of reconciling or substantiating the opposed trends of libido and aggression. As a final stage, the independence of aggression as a separate quality of ego instinct is proposed. Eros gives rise to sexual energy, the death instinct to destruction. The death instinct appears to possess its own biological basis.—*H. D. Spoerl* (American International College).

4446. Bischler, W. *Selbstmord und Opfertod*. (Suicide and self-immolation.) *Imago, Lps.*, 1936, 22, 177-195.—Suicide is a species of self-punishment and self-annihilation based on conflicts with the id and the ego or super-ego, or on the direct domination of the death instinct. Self-immolation is often due to domination of the super-ego. It may be regarded as an instance of identification of ego with super-ego.—*H. D. Spoerl* (American International College).

4447. de Haan, W. J. *Psycho-analyse. Ontwikkeling van Freud's leer en critische beschouwingen*. (Psychoanalysis. The development of Freud's doctrines and critical observations.) Amsterdam: H. J. Paris, 1935. Pp. 252. F 2.90, 3.90.—The development is traced in ideational or association psychology, drives and instincts, depth psychology, and metapsychology. These are treated as integrated aspects of the total system. Vigorous, objective criticism is presented of the doctrines of pansexualism, Oedipus complex, and the attack upon religion.—*O. N. de Weerdt* (Beloit).

4448. Eidelberg, L. *Zum Studium des Versprechens*. (The study of slips of the tongue.) *Imago, Lps.*, 1936, 22, 196-202.—Mistakes in speech are to be attributed to a defense reaction of the ego rather than to direct wish-fulfillment. This defense, whose mechanism is not conscious, results in turning the instinct which seeks gratification against the ego, and in the mobilizing of counter-energy. It is not certain that all slips of the tongue are to be explained by this mechanism.—*H. D. Spoerl* (American International College).

4449. Emerson, H. *Alcohol, its effects on man*. New York: Appleton-Century, 1936. Pp. 139. \$0.80.—Student's edition.—*R. R. Willoughby* (Brown).

4450. Kross, A. *Zur Psychologie des Geheimnisses*. (The psychology of secrets.) *Imago, Lps.*,



1936, 22, 202-210.—With developing sexuality the phenomenon of the secret continues to be manifest beyond the anal stage in which it has its origin. In the anal stage content predominates; beyond this stage, the mechanism of conflict between retention and expression takes the lead. The secret may become an aid to exhibitionism, and it ultimately attains the status of a boon to be awarded (in telling it) in the interests of achieving complete social adaptation.—*H. D. Spoerl* (American International College).

4451. **Hitschmann, E., & Bergler, E.** *Frigidity in women: its characteristics and treatment.* *Nerv. ment. Dis. Monogr. Ser.*, 1936, No. 60. Pp. 76. \$2.00.—This monograph treating the subject of frigidity in women and its characteristics and treatment is presented from the psychoanalytic point of view. Chapter I gives a general survey of the field, classifying the various types of women in relation to sex. Chapter II summarizes the development of female sexuality and discusses in detail the essential characteristics of female sexual life. Chapter III discusses the concept, symptomatology and degrees of frigidity, listing 18 types of frigidity. These are then discussed in essential detail and illustrated with case material. Chapter IV is devoted to a discussion of two psychoanalytically cured cases of frigidity. Chapter V is concerned with the prevention and treatment of frigidity. The book is indexed.—*M. H. Erickson* (Eloise Hospital).

4452. **Hoffmann, K.** *Seltsamer Weg der Erotik.* (An unusual method of obtaining erotic satisfaction.) *Krim. Mh.*, 1936, 10, 86-87.—This consisted in repeated obscene proposals by telephone to girls advertising for positions in households without women. The man refused to write or to meet the girls. He was a young married business man who for several years had derived complete physical and psychic satisfaction from this practice.—*M. E. Morse* (Baltimore).

4453. **Jones, E.** *Die Psychoanalyse und die Triebe.* (Psychoanalysis and the instincts.) *Imago, Lpz.*, 1936, 22, 129-146.—Translation of *Brit. J. Psychol.*, 1936, 36, 272-288.—*H. D. Spoerl* (American International College).

4454. **Loewenstein, R.** *La psychanalyse des troubles de la puissance sexuelle.* (The psychoanalysis of disturbances of sexual potency.) *Rev. franc. Psychanal.*, 1935, 8, 538-600.—The causes of sexual impotence are listed as biological, psychological, and social. This citation contains the first 5 chapters of a description of the results for etiology and for therapy by the psychoanalytic method. In Chapter 1 the disturbances of sexual potency are classified according as they concern erection, ejaculation, orgasm, or the genital appetite, and clinical forms are described. Chapter 2 describes the evolution of the genital function in the male, and then follow chapters devoted to each of the first three types of disturbance. Discussion is to be continued.—*J. McV. Hunt* (Brown).

4455. **Myers, F. W. H.** *Human personality and its survival of bodily death.* New York: Longmans, 1936. Pp. 318. \$1.60.—*R. R. Willoughby* (Brown).

4456. **Odier, C.** *Document catamnestique sur un cas d'impuissance orgastique. Considérations sur les relations de cette impuissance avec le caractère et sur le transfert postanalytique.* (Catamnestic document concerning a case of orgasmic impotence. Considerations of the relations of this impotence with character and of the postanalytic transference.) *Rev. franc. Psychanal.*, 1935, 8, 615-666.—*J. McV. Hunt* (Brown).

4457. **Parcheminey, G.** *Exposé clinique d'un cas d'impuissance.* (A clinical account of a case of impotence.) *Rev. franc. Psychanal.*, 1935, 8, 601-614.—*J. McV. Hunt* (Brown).

4458. **Stöckmann, T.** *Bericht über die Weiterentwicklung meiner Schlafzeitforschung.* (Report on the further development of my researches on sleep periods.) *Münch. med. Wschr.*, 1934, 81, 1353-1354.—This concluding section of Stockmann's studies on the problem of the normal duration of sleep deals with the stimulating and curative effects. The optimum sleep period for a given individual cannot be determined arbitrarily. Neurasthenic and asthenic persons become rested and capable of work if they take more than their usual amount of sleep, e.g. 19-24 hours.—*Speer* (Landau, Bodensee).

4459. **Törngren, P.** *Striden om Freud.* (The fight about Freud.) Stockholm: Bonniers, 1936. Pp. 400.—A thorough, supposedly objective, discussion of Freudianism, with all conclusions in favor of Freud.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4460. **Utida, Y.** *A scientific interpretation of literary works.* *Jap. J. appl. Psychol.*, 1936, 4, 96-119.—Visions due to mescaline injection were compared with several descriptions of contemporary literary works, and were taken as a basis of interpretation for the latter.—*R. Kuroda* (Keijo).

[See also abstracts 4329, 4401, 4466, 4562, 4639, 4745.]

#### NERVOUS AND MENTAL DISORDERS

4461. **Adler, A.** *Symptomwahl.* (Choice of symptoms.) *Int. Z. Individ.-Psychol.*, 1936, 14, 65-80.—Neuroses, delinquency, and criminality are only symptoms of an erroneous life style. Organic weaknesses in infancy may lead to feelings of insecurity, impatience, and self-distrust that persist throughout life. Children with defective digestion sometimes develop greed for food and later excessive greed for money. Many money magnates have suffered from lifelong digestive disturbances. Spoiled children constantly fear loss of power over others. Many families make the mistake of over-emphasizing some one virtue, such as cleanliness. The child revolts, enjoys the excitement his revolt causes, and revolts more. Stuttering, enuresis, and even school difficulties may develop in this way. If symptoms later disappear, it is because they have lost their value for attracting attention. Any virtue may be over-emphasized except social interest; this must become active in childhood or be revived later. Three illustrative cases are fully explained.—*M. F. Martin* (West Springfield, Mass.).

4462. Akelaitis, A. J. E. Psychiatric aspects of myxedema. *J. nerv. ment. Dis.*, 1936, 83, 22-35.—No specific type of psychosis is associated with myxedema. In non-psychotic cases of myxedema there is a specific mental state characterized essentially by psychomotor retardation and fatigability. Stuporous states may occur. Thyroid treatment produces definite improvement, but the treatment should be individualized.—C. R. Atwell (Boston Psychopathic Hospital).

4463. Akkerman, V. J. [Anunkophrenia; the syndrome of the past. The structure of the post-processual delusion formation of the type of the fantastically confabulating paraphrenia.] *Nevropat., Psikiat., Psikhogigh.*, 1936, 5, 587-614.—The described syndrome shows the structure of post-processual delusion formation based on a fantastic confabulation with the traits of paraphrenia. The essential elements of this structure are as follows: the pathobiological basis—a deep, peculiar organic defect; the central psychopathological disorder—a wreck of the conscious personal activity with conserved object consciousness. A series of secondary symptoms is encountered: the polar estrangement of the word sense and assignment of a new sense (akuphrenia, opticophrenia, symbolic thinking, a majestic tendency in delusions); falling out of the past experience, disactualization of the reinstated personality with a tendency toward the past; a phenomenon of rotation.—A. Yarmolenko (Leningrad).

4464. Angelini, G. Enuresi e disturbi della sensibilità. (Enuresis and disturbances in sensitivity.) *G. Med. milit.*, 1935, 11, 1047-1056.—G. M. Hirsch (Rome).

4465. Barilari, M. J. Contribución a la medicina psíquica. (Contribution to psychic medicine.) Buenos Aires: 1934. Pp. 125.—The volume consists of three parts: (1) the "tension-phobia" or affective disturbances in cases of emotional hypertension; (2) the necessity for a "syntonic" situation in the relation between the psychotherapist and the patient; (3) illustrations of Adler's individual psychology.—(Courtesy *Année psychol.*)

4466. Beck, L. F. Hypnotic identification of an amnesia victim. *Brit. J. med. Psychol.*, 1936, 16, 36-42.—In addition to analyzing the course of a case of hysterical amnesia, there is an attempt to show that a hypnotized person actively participates and can discriminate selectively, even to the point of trickery, in order to foster a wish. Despite all hypnotic efforts, a localized amnesia for a 4-months period persisted; it appeared that the patient carefully selected only those facts which could in no way interfere with a return to his family, which he ardently desired.—J. R. Hilgard (Stanford).

4467. Bender, L. Reactive psychosis in response to mental disease in the family. *J. nerv. ment. Dis.*, 1936, 83, 143-165.—C. R. Atwell (Boston Psychopathic Hospital).

4468. Bogen, E. F. Effects of long hospitalization on psychotic patients. *U. S. Veterans' Bur. med. Bull.*, 1936, 12, 345-353.—The first year of hospital

care is most significant in the treatment of the psychotic. Long-continued hospitalization is likely to be detrimental to the patient. Carefully controlled paroles and furloughs are of therapeutic value.—C. M. Louttit (Indiana).

4469. Bonhoeffer, K. Psychopathologische Erfahrungen und Lehren des Weltkrieges. (Psychopathological experiences and lessons of the world war.) *Münch. med. Wschr.*, 1934, 81, 1212-1215.—The war did not increase the ordinary types of mental disease, and produced no hitherto unknown forms. The endogenous disorders followed their inherent laws. As to their etiology, the war taught that the probabilities are absolutely against the inheritance of environmental influences. Hysterical reactions occurred only among troops in service, not among prisoners, and their presence does not necessarily connote a psychopathic personality. The exclusion of psychopaths from war service is dysgenic from every aspect. All Germany's systematic eugenic efforts will never succeed in overcoming the dysgenic effect of war.—Speer (Lindau, Bodensee).

4470. Braatöy, T. The prognosis in schizophrenia with some remarks regarding diagnosis and therapy. *Acta Psychiat., Kbh.*, 1936, 11, 63-102.—Decisive criteria regarding the above phases of dementia praecox are conspicuously lacking. Therapeutic measures and investigations are often based upon personal conviction and so-called clinical evaluation. Résumé of other research in the field and original material. Bibliography.—H. A. Kohn (Mooseheart Laboratory for Child Research).

4471. Braatöy, T. Kliniske bemerkninger om hysteri og såkalte funksjonelle lidelser. (Clinical remarks on hysteria and so-called functional ailments.) *Tidsskr. norske Laegeforen.*, 1936, 56, 474-482.—Continuation of an earlier article on the same topic (see X: 3529).—M. L. Reymert (Mooseheart Laboratory for Child Research).

4472. Buckley, A. C. Nursing mental and nervous diseases, from the viewpoints of biology, psychology and neurology; a textbook for use in schools for the training of nurses. (4th ed.) Philadelphia: Lippincott, 1936. Pp. 312. \$3.00.—R. R. Willoughby (Brown).

4473. Burchard, E. M. L. Physique and psychosis. An analysis of the postulated relationship between bodily constitution and mental disease syndrome. *Comp. Psychol. Monogr.*, 1936, 13. Pp. 73.—This investigation attempts to ascertain whether there is a differential distribution of body types, as selected by the impression method, between schizophrenia and circular insanity; whether impressionistic diagnoses can be verified by use of anthropometric methods; to what extent, if any, there is a differential distribution of anthropometric measurements between the two types of psychosis; whether age, nationality, education, and occupation are differentiating factors; and to what extent there is a correlation between body type and pre-psychotic personality. The subjects were 407 male white patients selected from the wards of various hospitals. The impression method

gave results similar to those of Kretschmer, showing an affinity of pyknic types for circular insanity and asthenics for schizophrenia. Anthropometric measurements of certain kinds differentiated the types of body build as judged by impression. Overlapping was so great, however, that none of these measurements could be reliably substituted for impression types. Differences in educational achievement were not apparent. Nationality was not a differentiating factor. Age was an important factor in that all individuals tend toward the pyknic as they grow older. Pre-psychotic types were not clearly differentiated in body build. Bibliography of 72 citations.—N. L. Munn (Peabody).

4474. Carmichael, F. A., & Chapman, J. A guide to psychiatric nursing. (2nd ed.) Philadelphia: Lea & Febiger, 1936. Pp. 175. \$2.25.—R. R. Willoughby (Brown).

4475. Cupcea, S. Iluzia greutatilor (semnul lui Demoor) la bolnavii mintali. (The weight's illusion—Demoor sign—in insane persons.) *Bul. Spital. Boli mint. nerv. Sibiu*, 1936, 63-64.—The illusion of weight as determined by the size of cubes and other forms, first discovered by Demoor, is studied in 129 insane persons. The illusion is absent in 29.45%. It varies from disease to disease.—N. Margineanu (Cluj, Rumania).

4476. Davis, J. E., & Dunton, W. R. Principles and practice of recreational therapy for the mentally ill. New York: Barnes, 1936. Pp. 224. \$3.00.—R. R. Willoughby (Brown).

4477. De Sanctis, S. Qualche commento clinico in tema di epilessia. (Clinical commentaries on epilepsy.) *Athena*, 1935, No. 2, 57-65.—The author discusses the etiopathogenesis of epilepsy and epileptic attitudes, the forms and clinical varieties of epilepsy, and isolated psychological epilepsy and other forms of the disease.—G. M. Hirsch (Rome).

4478. Epstein, A. L. [Studies on somatics in psychiatry. The problem of vertigo in neurotics. The psycho-vestibular syndrome of the intermediate states.] *Neuropat., Psihiat., Psihologh.*, 1936, 5, 395-414.—The conception of vertigo does not correspond to a definite and precise phenomenon. The contents of the term vertigo have changed in recent times, and do not include the state of consciousness and changes in the brain. The author divides all observed forms of vertigo into the labyrinthal, cerebropathic, neurotic and psychotic. The peculiarities of vertigo in psychoneuroses are connected with the conception of psychoneuroses as intermediate states between sleep and waking (from the pathophysiological point of view). The refraction of the vertigo symptoms in the dream-like disturbed consciousness of psychoneurotics changes these symptoms, altering them to the symptoms of psychoneuroses. For neuroses the author states a separate psycho-vestibular syndrome.—A. Yarmolenko (Leningrad).

4479. Fauville, A. Déficiences spécifiques. (Specific deficiencies.) *Rev. belge Pédag.*, 1935, 17, 80-85.—The author discusses briefly the results obtained

from certain mental and educational tests which were given to three pupils in a training school for the feeble-minded. Speech deficiencies and differences between verbal and non-verbal intelligence were indicated.—R. Nihard (Liège).

4480. Fauville, A. Intelligence verbale. (Verbal intelligence.) *Rev. belge Pédag.*, 1935, 17, 145-150.—The author presents three cases in which inferiority in non-verbal intelligence as compared with verbal intelligence, measured by the Stanford-Binet scale, was accompanied by various, more or less serious disturbances in conduct. These results are in accordance with those obtained by Dellaert, indicating a correlation between inferiority in non-verbal intelligence and delinquency. (See IX: 3352).—R. Nihard (Liège).

4481. Fauville, A. Un débile mental calculateur prodige. (A feeble-minded calculator prodigy.) *Rev. belge Pédag.*, 1936, 17, 338-344.—The author describes the case of a healthy 12-year-old boy who was below normal in his social behavior, particularly in speech and educational achievement. The previous year his Binet mental age was 5.4. His intelligence performance was exceptionally high: he performed mental additions and multiplications of two-place numbers, he was a calendar calculator, his Pintner-Paterson age was 13, his Porteus maze rating was 9.6, his Goodenough man-drawing rating was 9, and he made the seventh grade mean score on the Ferguson form boards. After special training he improved greatly, his IQ rising from 55 to 77 in a 15-month period. Fauville concluded that the boy was formerly completely absorbed in the activities in which he showed special aptitude, with a consequent neglect of other types of behavior, thus explaining his inferiority in social activities and verbal intelligence.—R. Nihard (Liège).

4482. Fedorov, S. I. [To the problem of perception of the mentally deficient child.] *Trud. Inst. Izuch. Mozga Bekht.*, 1936, 5, 210-226.—The peculiarities of perception in mentally deficient children were investigated by separate tests of the author's own construction, and by a series of complex pictures and "incongruities." The structure of perception of the mentally deficient child is not enough differentiated and is limited to a too narrowly perceived field. This can be explained by a limited number of connections which can be formed by the child, and by a poor systematization of the data perceived by him. The narrow and unconnected perceptions of the mentally deficient child define the specific form of his attention, which is regulated in its dynamics not by internal logical motives but by casual sensory stimuli. The incompleteness of the structures of perception of the mentally defective child increases with the complex connections in perceived phenomena, which changes correspondingly the process of further perception.—A. Yarmolenko (Leningrad).

4483. Fedorov, S. I. [The typology of the forms of mental deficiency.] *Trud. Inst. Izuch. Mozga Bekht.*, 1936, 5, 263-314.—The author describes his diagnostic method and establishes 5 groups of



mentally deficient children: (1) Children with retarded development but without disproportion in the structure of intellectual activity and without separate psychic disorders. The etiological moment most often met is a weak physical status as the result of many diseases from bad social and material conditions. (2) Children with general intellectual disorders and disproportional structure and course of their intellectual activity. In these cases organic lesions of the central nervous system are found. (3) Children with partial intellectual defects, having as etiological factors organic local lesions of the central nervous system or a temporary retardation of the development of psychic functions. (4) Children with low intellectual work ability based on functional disorders of the nervous system as a whole. The intellectual activity of these children is not disordered in its structure but there is an impediment in action from the general pathological state of the nervous system. (5) Children with low intellectual work ability depending not upon intellectual disorders but upon pedagogical faults; these are culturally neglected children without habits of intellectual work and without knowledge of the school program.—A. Yarmolenko (Leningrad).

4484. Gilarovsky, V. A. [The fundamental principles in the problem of therapy of schizophrenia.] *Klin. Med.*, 1936, No. 2, 163-176.—The contemporary methods of therapy in schizophrenia are empirical and combat only separate secondary symptoms. There cannot be a unique method of therapy because of multiform pathogenesis and symptoms. The therapy must be based on the specific etiology and somatic base of the disease. As the fundamentals of schizophrenia are not so much the destructive brain process as the toxic changes, the therapy must aim to reconstruct the schizophrenic process by the change of physico-chemical processes. It was observed that schizophrenia has an easier course on a heteronomous base (for instance a cycloid one), so that the creation of a heteronomous base can be used as a therapeutic means.—A. Yarmolenko (Leningrad).

4485. Gullotta, S. *Ipnocici e catatonie*. (Hypnotics and catatonie.) *Atti Congr. Soc. ital. Psichiat.*, 1935, 20, 765-768.—According to the author's observations, there is a close connection between sleep, catatonie and phenomena of insensibility, narcosis, catalepsy, hypnosis, coma, etc., which represent disturbances in the waking state.—G. M. Hirsch (Rome).

4486. Guttman, E. *Congenital arithmetic disability and acalculia* (Henschen). *Brit. J. med. Psychol.*, 1936, 16, 16-35.—Recent observations indicated the occurrence of arithmetic disturbances after focal cerebral lesions. This symptom has been especially noted within the so-called parietal syndrome, occurring there with constructional apraxia, agraphia, and disturbances of naming colors. Such a case is described here.—J. R. Hilgard (Stanford).

4487. Horwitz, W. A., & Kleiman, C. *Survey of cases of dementia praecox discharged from the psychiatric institute and hospital*. *Psychiat. Quart.*, 1936, 10, 72-86.—In the majority of cases, recoveries

seemed unexplained and not causally related to therapy.—C. R. Atwell (Boston Psychopathic Hospital).

4488. Ionasiu, L., Lungu, C., Iosit, S., & Cupcea, S. *Contributiuni la studiul experimental al perceptiei vizuale la bolnavii mintali*. (Experimental contributions to the psychology of perception of demented people.) *Bul. Spital. Bol. mint. nerv. Sibiu*, 1936, 28-35.—Four categories of cards with (a) black dots, (b) various black figures, (c) colored figures, and (d) letters and words, given by means of a tachistoscope, were applied to normal and insane people. Results: (1) the visual perceptions of persons affected by dementia praecox and autism are inferior to those of normal people; (2) the perceptions of persons suffering from delirium are better than those of normal persons, but they are not very accurate; (3) the perceptions of individuals affected by psychoneuroses are also better than normal; (4) the manic-depressives have inferior perceptions of figures, but superior perceptions of color. There is a certain similarity between these results and those of Rorschach.—N. Margineanu (Cluj, Rumania).

4489. Ivanov-Smolensky, A. G. *Prolonged sleep treatment is successful in curing cases of schizophrenia*. *Moscow News*, 1936, 6, 2; 11.—I. P. Pavlov, on the basis of his prolonged (1918 until his death) study of schizophrenic patients in Leningrad psychiatric hospitals, compared the clinical catatonic manifestations of this pathological inhibition with hypnotic states, "intermediary phases between a healthy state and complete sleep." On the hypothesis that schizophrenia arises in the nervous system and the inhibition spreads over its motor area, he formulated the theory of "protective inhibition," a unique form of self-protection by the brain against destruction. By employing a specially prepared narcotic mixture from the formula of the Swiss scientists Cloetta and Maier, he put to sleep 12 patients for a period of from 10 to 12 days. The result of this sleep-producing therapy Pavlov characterized as "astonishing." Not only was it possible to avoid deaths completely, but in most cases even serious complications were absent.—S. W. Downs (Berkeley, Calif.).

4490. Kameneva, E. N. [A case of schizophrenia in old age. A contribution to the problem of mild schizophrenia.] *Nevropat., Psikhiat., Psikhoghigh.*, 1936, 5, 367-394.—A. Yarmolenko (Leningrad).

4491. Karlan, S. C. *Psychosis following anesthesia*. *Psychiat. Quart.*, 1936, 10, 143-148.—Citation of a case in which the apparent psychogenic cause of the psychosis was open drop ether anesthesia.—C. R. Atwell (Boston Psychopathic Hospital).

4492. Kohanovsky, J., & Ostrov, S. [An attempt to evaluate motor disorders in poliomyelitis as to the work ability of patients.] *Nevropatol., Psikhiat., Psikhoghigh.*, 1936, 5, 490-504.—A. Yarmolenko (Leningrad).

4493. Kora, T. *The sexual obsession and its treatment*. *Jap. J. appl. Psychol.*, 1936, 4, 91-95.—A case of sexual obsession is described, and it is

claimed that Morita's treatment of neuroses is near to our ideal.—*R. Kuroda* (Keijo).

4494. **Kornev, I. P.** [The peculiarities of the work process of mentally deficient children.] *Trud. Inst. Izuch. Mosga Bekht.*, 1936, 5, 243-262.—The peculiarities of the work process of mentally deficient children were investigated in polytechnical classes in a special school. The methods used there were: (1) an analysis of the pedagogical process, (2) pedagogical experiments, (3) questionnaire, (4) anamnesis of the pupils, psychological investigation, pedagogical characteristics and data on the environment. The fundamental components of the polytechnical process (planning, choosing of materials, the motor habits, polytechnical horizon, technical interests and the work attitude) were investigated, and the psychic peculiarities of mentally deficient children were determined. There were found limited attention, limited use of former experience, a low understanding of interrelations of work operations, a limited technical horizon even in cases of high interest in technics, etc. Some practical advice for the work education of mentally deficient children is given.—*A. Yarmolenko* (Leningrad).

4495. **Kraiz, S. V.** [The psychosensory disorders in schizophrenia.] *Neuropat., Psikhiat., Psikhoghigh.*, 1936, 5, 615-640.—A study of the psychosensory disturbances in some forms of schizophrenia is important because the same symptoms are observed in other diseases with a more distinct pathogenesis and etiology (organic lesions of the brain and toxo-organic disorders). The following phenomena were observed: (1) perception of stationary objects as moving ones; (2) receding of objects from the eyes; (3) constriction and apparent splitting up in the visual field; and changes of perception of; (4) size of objects; (5) spatial relations; (6) consistency of surrounding objects; (7) color of objects; and (8) a changing perception of the patient's own body. The appearance of psychosensory disorders in cases of schizophrenia is connected with the motor vocal functions, affective phenomena, interrupted sleep, and vegetative disorders. Psychosensory disorders in cases of schizophrenia are observed in patients when awake or dreaming, with frequent co-existence of psychosensory disorders and hypnotic hallucinations.—*A. Yarmolenko* (Leningrad).

4496. **Kroll, F. W.** *Systemerkrankungen des Rückenmarkes, Degenerativerkrankungen.* (Systemic diseases of the spinal cord, degenerative diseases.) *Fortschr. Neurol. Psychiat.*, 1936, 8, 196-218.—The author considers Spielmeyer's book on the problem of systemic diseases the most important recent publication of a general nature in the field. The article includes, as well, discussions of other publications dealing with topics such as spastic spinal paralysis, spinal progressive muscle atrophy, amyotrophic lateral sclerosis, neural muscle atrophy, progressive muscle dystrophy, and myasthenia gravis. There is a bibliography.—*D. S. Oberlin* (Newark, Del.).

4497. **Lange, J.** *Seelische Störungen im Greisenalter.* (Mental disorders in old age.) *Münch. med.*

*Wschr.*, 1934, 81, 1959-1964.—Lang discusses the postponement of the aging process among civilized peoples; the decrease of crime and increase of suicide in later life; the care of old persons; senile dementia; Pick's disease; and the nature and meaning of the aging mentality. He considers that constitution is more important than environment in determining the individual's fate in the second half of life. In the past histories of senile dementers, especially those having delusions of persecution, abnormal traits are the rule; they have often been quarrelsome, suspicious, autistic, loveless personalities. This fact suggests a close relationship between schizophrenia and senile dementia.—*Speer* (Lindau, Bodensee).

4498. **Lebedinsky, M. S.** [The psychological analysis of a case of sensory aphasia.] *Neuropat., Psikhiat., Psikhoghigh.*, 1936, 5, 580-587.—In a case of sensory aphasia the patient's understanding of speech was to a large extent determined by the degree of coincidence of words with the visual functional situation in which he was placed. The patient understood his wife about family affairs, his nurse about his daily needs, but failed to understand the same words from his doctor or other new persons. When the patient understood other people's speech best his own speech was also going easily. The difficulty of understanding other people's speech invariably confused the patient's own speech. Thus the understanding of speech and active speech were closely connected and determined by the relation of speech to the concrete situation.—*A. Yarmolenko* (Leningrad).

4499. **Lindner, T.** *Ur saneringsarbetet på psyko-terapiområdet.* (From the clearing-up work in the psychotherapeutic field.) *Soc.-med. Tidskr.*, 1936, 4, 77-79.—Five definite reasons are offered as proof that psychoanalysis will never be officially medically recognized in the therapeutic field, the last point being that no satisfactory statistics which prove the value of psychoanalysis are available and probably never will be.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4500. **Lungwitz, H.** *Erkenntnistherapie für Nervöse.* (Knowledge therapy for the nervous.) Kirchhain N.-L.: K. Schmiersow, 1934. Pp. 186.—A continuation of the author's work on psychobiology, to which is added his interpretation of the therapeutic process in which any causal relation between the steps taken by the physician and the consequences in the patient is denied. The biological state of the patient determines the outcome in each case. The biological principle is most important; the existing therapeutic measures are not entirely without value.—(Courtesy *Année psychol.*)

4501. **Manoil, A.** *Despre examenul psihologic al unui bolnav mintal.* (On the psychological examination of insane persons.) *Anal. Psihol.*, 1935, 2, 137-142.—The psychological examination of intelligence, other mental abilities and personality traits of psychotics as done by Lahy in the Henri Rouselle Hospital, Paris, is discussed.—*N. Margineanu* (Cluj, Rumania).

4502. Morel, F. *Examen audiométrique de malades présentant des hallucinations auditives verbales.* (Audiometric examination of patients presenting verbal auditory hallucinations.) *Ann. méd.-psychol.*, 1936, 94, 520-533.—Out of 34 patients with auditory verbal hallucinations, only 3 were too uncooperative to examine thoroughly with an audiometer. Most of these showed no organic defect in their auditory apparatus. However, while they were hallucinating, the threshold was usually raised and there were often gaps in the audiogram. It was as though the patient could not hear two things at once. After the hallucination had been discontinued, the hearing became normal again.—M. B. Mitchell (N. Y. A., Concord, N. H.)

4503. Neumann, A. *Die individualpsychologische Deutung und Behandlung der Neurose.* (The individual-psychological interpretation and treatment of neurosis.) *Int. Z. Individ.-Psychol.*, 1936, 14, 80-94.—Neurosis always has a goal. A child by becoming sick may escape a dreaded school period. With adult neurotics the goal is not so obvious. The neurotic fears that he will be incompetent for the demands of life. Often he has set these demands needlessly high from a desire to excel others. Discouraged, he becomes sick so that he can escape his obligations without blame. Treatment consists in tactfully revealing to the patient his wrong life style without discouraging him still further. The most important part of treatment is encouragement.—M. F. Martin (West Springfield, Mass.)

4504. Oparina, N. V. [The role of optic structures in the constructive-technical activity of the mentally deficient child.] *Trud. Inst. Isuch. Mosga Bekht.*, 1936, 5, 227-242.—The investigation aimed to establish the peculiarities of thinking of mentally deficient youth in constructive-technical activity. The investigated subject was asked (1) to reproduce a house and a locomotive on a given schematic drawing, (2) to construct a crane from given separate parts after looking at a given model. The results were as follows: the defects of construction depend on the poor and narrow optical structures and their contents in mentally deficient youth. The given object is not wholly included in the subject's consciousness, and this object is like a conglomerate of separate elements with no connections between them. Optical structures of mentally deficient youth are not differentiated, but are freely and simply interrelated optically without fixation in a system of logical interrelations. These external connections are expressed in the working process as external signs: size, form, color patches, etc. The optic structure of the object helps the mentally deficient youth in his activity and thinking, but it also binds his thinking and limits him to a monopoly of optical situation even where optical perception should give place to logical system. The above described traits are expressed most by the most deficient group of children in their constructive-technical activity.—A. Yarmolenko (Leningrad).

4505. Payne, S. M. *Post-war activities and the advance of psychotherapy.* *Brit. J. med. Psychol.*,

1936, 16, 1-15.—Since the war two activities have steadily progressed and increased in importance—an increase in machinery of all kinds, and the growth and organization of interest in psychology. These represent contrasting efforts to achieve the common aim of security. In both cases the drive depends on self- and race-preservation impulses. Causes for this increase in psychical matters since the war may be found in the doctor's attitude toward disease of psychogenic origin owing to his experience of mental disease among combatants, and to the inability of many to accept the loss of husband or son. Modern methods of psychotherapy can be divided into those which are successful mainly by reanimating unconscious infantile situations in which anxiety is relieved by a belief in omnipotence and those which aim at increasing the sense of reality.—J. R. Hilgard (Stanford).

4506. Plotnikova, E. E. [The peculiarities of the work process of mentally deficient children.] *Trud. Inst. Isuch. Mosga Bekht.*, 1936, 5, 184-209.—The subjects, morons and imbeciles 12-14 years old, were observed in class work and school shops and in experiments based on text copying, reckoning and carpentering; the children themselves chose the most interesting of these. The work process is relatively intense in experimental conditions because of environmental stimulation. Defective children do not use all their powers. The mobilization of will decreases with increase of difficulty. Quality and quantity of work are poor: fatigue is rare because of the low intensity. The children are annoyed by the work and refuse to continue it. The moron children are tired by interesting work because it is more intense; the imbeciles refuse before they are fatigued. In morons primitive competition was observed; the imbecile pairs tend to follow the weaker partner.—A. Yarmolenko (Leningrad).

4507. Preda, G. *Conceptii moderne asupra psihologiei medicale.* (Present views in medical psychology.) *Bul. Spital. Boli mint. nerv. Sibiu*, 1936, 4-16.—A short critical review of present views in medical psychology, followed by an attempt to define the main contributions of psychology to psychiatry. The clinical method should be completed by the experimental psychological method. The diagnosis of mental disease requires a good insight into the personality of the insane. Tests and apparatus are very helpful in improving this insight. They have already been introduced in the hospital for mental diseases at Sibiu, Rumania, headed by Preda, and the results have been rather satisfactory.—N. Margineanu (Cluj, Rumania).

4508. Preda, G. *Rezultatele aplicarii probei cubul lui Loewe la bolnavii mintali.* (Results of the application of Loewe's cubes to insane persons.) *Bul. Spital. Boli mint. nerv. Sibiu*, 1936, 61-62.—Loewe's cubes are applied to 120 persons suffering from various mental diseases. The time of arranging the cubes varies from disease to disease. It is 1.20 sec. for hysteria, 1.25 for melancholia, 2.14 for paranoia, 2.32 for mania, 3.25 for paraphrenia, 6.36 for schizophrenia, 8.56 for general paraphrenia, and 14.26 for epilepsy.—N. Margineanu (Cluj, Rumania).



4509. Preda, G., & Popescu, I. *Asociația liberă în stările delirante.* (Free association in delusional states.) *Bul. Spital. Boli mint. nerv. Sibiu*, 1936, 52-56.—The Kent-Rosanoff 100-word test was used. The experiment was performed with 80 subjects, 40 normal persons (20 men and 20 women) and 40 insane persons (20 men and 20 women) affected by schizophrenia, paranoia, paraphrenia, delusions, etc. Persons suffering from delusions have an augmentation of 30% in their affective association; a diminution of 20-10% in their association by similarity; one of 13-5% in their association by utility and coexistence; one of 12-5% in their associations by contrast; and one of 12-5% in their associations by contrast. Complexes seem to play the largest role in the case of women.—*N. Margineanu* (Cluj, Rumania).

4510. Preda, G., Stoenescu, T., & Cupcea, S. *Contribuțiunile la studiul psihologic al dementiei.* (Contributions to the psychological study of dementia praecox.) *Bul. Spital. Boli mint. nerv. Sibiu*, 1936, 17-24.—The practical value of intelligence testing in mental pathology is discussed. Babcock has observed that the vocabulary of insane people, except those suffering from epilepsy, is very little affected; consequently she attempted by vocabulary examination to establish the IQ of the person previous to the disease. This was then compared to the IQ of the person when sick and the degree of his mental deterioration measured. The language, however, is largely dependent upon profession, culture and education, a fact which brings much trouble in Babcock's method. Therefore the authors look for another criterion for distinguishing between various mental diseases by intelligence testing. This criterion seems to be given in the mean variation of the tests. While a normal person solves, for instance, 15 tests in about the same degree, the insane person resolves one test very fairly, but fails to resolve entirely the second, etc. The Pintner-Paterson performance tests are applied to 41 insane people. The mean variation of the 15 tests is 1.34 for people having syndromes without dementia, 2.00 for people suffering from dementia praecox, 2.23 for dementia, including schizophrenia, and 2.34 for schizophrenia. The variation is attributed to certain lacunae in mental capacity. These lacunae are obvious especially in the case of the Healy pictorial completion and Knox cube tests.—*N. Margineanu* (Cluj, Rumania).

4511. Preda, G., Stoenescu, T., & Cupcea, S. *Metoda timpului de asociație și aplicările ei la cățiva bolnavi mintali.* (Free association and its application in insanity.) *Bul. Spital. Boli mint. nerv. Sibiu*, 1936, 36-46.—30 persons suffering from various mental diseases are studied by means of Jung's free association method. Results: (1) The reaction time of manics is relatively short; (2) a delayed reaction is proof that certain traumas and complexes are present; (3) certain suggestions in regard to the preoccupations in delusions are reached; (4) it is not possible to make an objective differentiation between certain important preoccupations of the patient, his delusions and complexes by this method alone; (5) the study is to be

continued in order to reach certain criteria for distinguishing between various complexes and delusions.—*N. Margineanu* (Cluj, Rumania).

4512. Preda, G., Stoenescu, T., & Cupcea, S. *La mémoire de fixation dans les maladies mentales.* (Memory in mental disease.) *Noua Rev. med.*, 1934, 9, 1-7.—The memory of 136 psychotics was measured in regard to remembering words, numbers (presented visually and auditorially), and images. The results are compared with those obtained in the case of normal people. The author plans to use his memory test as an instrument in diagnosing mental diseases. Conclusions: (1) mental disease affects visual memory more than auditory memory, and memory for numbers is most affected; (2) each disease seems to affect memory in its own way and degree.—*N. Margineanu* (Cluj, Rumania).

4513. Prokupek, J. *Vliv zenitby jako exogenního emocionálního činitele na exacerbaci latentních duševních chorob a na vznik reaktivních stavů.* (The influence of marriage as an exogenous emotional factor upon the intensification of latent mental diseases and upon the development of reactive conditions.) *Rev. Neurol. Psychiat.*, Praha, 1936, 33, 13-19; 45-54.—Marriage, if accompanied by a strong emotional experience, can precipitate a latent mental disease, as can any type of psychic trauma. There are no specific symptoms of mental conditions occasioned by marriage. It seems, however, that a psychic trauma cannot occasion a mental disease unless the disease has been latent. Three of the four cases discussed in the article had shown signs of latent schizophrenia before the onset of this psychosis following marriage. The fourth case was one of explosive psychopathic constitution and developed a reactive depressive condition from which a recovery was made. All cases were of poor heredity.—*Z. Piotrowski* (Columbia).

4514. Read, C. S. *Principles of psychotherapy as applied to general practice.* *Brit. med. J.*, 1934, No. 3829, 931-936.—Analytic therapy is the ideal method of treatment; however, "hypnotism, simple suggestion, persuasion, and re-education all have their useful applications." The method to be employed is determined by the particular case. The above methods are briefly discussed.—*R. Goldman* (Worcester State Hospital).

4515. Repond, A. *Les tendances actuelles de la psychiatrie en Suisse.* (The present tendencies in psychiatry in Switzerland.) *Ann. méd.-psychol.*, 1936, 94, 718-737.—The Swiss mental hospitals are decentralized and each of the 25 cantons has its own laws regarding responsibility for psychopaths, commitments, financing, and discharges. Long before the founding of the Swiss Society for Mental Hygiene in 1926 much prophylactic work was done. Organizations were established to find work and provide reeducation for mental patients. Auguste Forel waged a battle against alcoholism. Most of the professors of psychiatry and superintendents of hospitals are former students of Bleuler. Kraepelin's classification of mental diseases is used in Switzerland for statistical purposes. Most members of the psychiatric

association are also members of the psychoanalytical society. The former split into the medical and non-medical divisions because the medical men resented the practicing of non-medical men. Child guidance clinics and psychiatric clinics have been formed in the larger communities. Considerable research with varied emphasis is conducted in the public mental hospitals as well as in the private hospitals and university clinics. Forel, Bleuler, Jung, and Monakow are among the renowned Swiss psychiatrists.—*M. B. Mitchell* (N. Y. A., Concord, N. H.)

4516. Rosca, A. *Orientarea profesională a copiilor epileptici*. (Vocational guidance of epileptic children.) *Satul si Scoala*, 1936, 5, 243-245.—A list of professions to be recommended to epileptic children, followed by a psychological discussion of the factors which have to be considered in this special case of vocational guidance.—*N. Margineanu* (Cluj, Rumania).

4517. Rosenheim, F. *Psychoses occurring in a father and his two daughters*. *Psychiat. Quart.*, 1936, 10, 87-98.—*C. R. Atwell* (Boston Psychopathic Hospital).

4518. Schumacher, L. *Geistesstörungen bei Ruhr-erkrankungen unter besonderer Berücksichtigung der ätiologischen Faktoren und Grenzgebiete*. (Mental disturbances in dysentery, with special reference to etiological factors and boundary zones.) Bonn: Schönershoven, 1935. Pp. 60.—*R. R. Willoughby* (Brown).

4519. Schwarz, R. *Auditory hallucinations in prison psychosis*. *Psychiat. Quart.*, 1936, 10, 149-157.—100 cases have been investigated as to content. Auditory hallucinations in prison psychosis are symptomatic of a state of fear, anxiety, insecurity and apprehension. The peculiar content seems to suggest that hallucinations are the outcome of a previous psychological experience.—*C. R. Atwell* (Boston Psychopathic Hospital).

4520. Simonini, R. *Assistenza ad anormali psichici e di carattere*. (Aid to psychologically and characterologically abnormal individuals.) *Pediat. prat.*, 1935, No. 2.—*G. M. Hirsch* (Rome).

4521. Skalweit, W. *Schizophrenie*. (Schizophrenia.) *Fortsch. Neurol. Psychiat.*, 1936, 8, 239-260.—This is a survey article dealing with contributions in the field since 1934. The first section is concerned with investigations on the etiology and pathogenesis of schizophrenia. It includes a discussion of work done by Lingjaerde, which itself comprises 12,000 single investigations. The second part of the article has for its subject circulation, inner secretion and vegetative disturbances. Other topics dealt with are catatonia, heredity and constitution, and clinical and therapeutic findings. Bibliography.—*D. S. Oberlin* (Newark, Del.)

4522. Ssukhareva, G. E., & Perskaya, S. S. [The clinico-psychopathological traits of a peculiar form of acute schizophrenia.] *Neuropat., Psikhiat., Psikhogig.*, 1936, 5, 567-579.—There are described the acute forms of schizophrenia developing in the pubertal period, which are very variable and poly-

morphous. The phases there observed are excitation and stupor. The peculiarities of these forms are connected with their development in a person with an age lability of the endocrine sphere. The atypical phenomena—disorders of consciousness, peculiar hallucinations, a rich somatic symptom complex—cause the author to think of a toxic etiology. The temporal factor plays a great role in the psychopathological picture of pubertal schizophrenia. The clinico-psychopathological form and course of schizophrenia are defined not only by the character of the pathogenic factor but also by all the peculiarities of the reactive changes.—*A. Yarmolenko* (Leningrad).

4523. Stoenescu, T. *Testul de atentie Toulouse-Piéron la bolnavii mintali*. (The Toulouse-Piéron attention test applied to insane people.) *Bul. Spital. Bol. mint. nerv. Sibiu*, 1936, 62-63.—The Toulouse-Piéron test was applied to 148 insane subjects with the aim of studying the score differences from one disease to another. The average score of normal persons is 134. The average score is 0 for idiots, 15 for imbeciles, 20 in mental confusion, 34 in epilepsy, 72 in general paralysis, 76 in melancholia, 77 in schizophrenia, 78 in mania, 80 in paraphrenia, 100 in psychasthenic, and 108 in paranoia.—*N. Margineanu* (Cluj, Rumania).

4524. Travis, R. C. *Experimental studies in ocular behavior. II. Ocular inadequacies in epileptic patients*. *J. Psychol.*, 1936, 2, 63-69.—The eye movements induced in 7 epileptic patients and 7 control subjects by their attempts to pursue an object oscillating at various predetermined speeds were recorded by the Dodge mirror recorder in order to determine some of the muscular inadequacies characterizing these patients. Outstanding differences appeared between the records of epileptic and normal subjects in terms of ocular pursuit adequacy (periodic inability to pursue the oscillating object in smooth continuous fashion) and in the number of corrective movements. Breakdowns of ocular pursuit occurred at slower speeds of oscillation in epileptics than in normals, as indicated by the increasing frequency of corrective movements.—*J. McV. Hunt* (Brown).

4525. Van der Scheer, W. M., & Hemmer, W. *Les tendances actuelles de la psychiatrie en Hollande*. (The present tendencies of psychiatry in Holland.) *Ann. méd.-psychol.*, 1936, 94, 554-580.—The psychiatric journals and associations in Holland are mentioned first. The requirements for psychiatric training are given. The tendencies and principal scientific work are given for the universities of Leyden, Amsterdam, Utrecht, and Groningen. Recognition is also given to the research performed in the mental hospitals. The psychoanalysts and psychotherapists in Holland are almost all members of the psychiatric association. Although numerous organizations are interested in eugenics, therapeutic sterilization has not been legalized. Psychiatrists play an important role in the treatment of criminals and psychopaths.—*M. B. Mitchell* (N. Y. A., Concord, N. H.)

4526. [Various.] *Novye puti v defectologii*. (New ways in defectology.) Moscow: Uchpedgiz,

1935. Pp. 216.—This collected volume contains 12 articles concerning questions of psychology and pathology of mentally deficient, deaf-dumb, and blind children. The evolution of speech, thought and motor capacity of defective children is described in the three first articles; new methods are given for these aims. Correction of speech and educational work in special schools, chronicles of a school for mentally deficient children, and some devices for teaching blind children form the other part of the book.—*A. Yarmolenko* (Leningrad).

4527. Velasco, C. *Primeras estadísticas de un servicio de psiquiatría escolar.* (First statistics on a school psychiatric service.) *Arch. Neurobiol.*, 1935, 15, 515-522.—The school psychiatric service was set up in 1933 in Madrid, for the purpose of diagnosis and classification of abnormal pupils. Of the 260 cases who were sent to the service, 15% were found to be normal. 30 classes of abnormalities were found. 27% of the abnormal group were diagnosed as feeble-minded, 18% were epileptic, 14% had language difficulties, 16% were unstable mentally. Data relative to incidence of abnormality in pupils of the different schools are given.—*R. M. Bellows* (Occupational Research Program).

4528. Wolfson, I. N. *Mental symptoms in brain tumors.* *Psychiat. Quart.*, 1936, 10, 5-33.—*C. R. Atwell* (Boston Psychopathic Hospital).

[See also abstracts 4359, 4549, 4591, 4731, 4754.]

#### PERSONALITY AND CHARACTER

4529. Angermann, F., & Weitsch, E. *Geistige Arbeit und Menschenkenntnis.* (Mental work and knowledge of human nature.) (2nd ed.) Berlin: Bott, 1936. Pp. 16.—*R. R. Willoughby* (Brown).

4530. Bujak, F. *The man of action and the student.* *Organon*, 1936, 1, 20-32.—A comparison is drawn between the man of action and the student. The man of action directs social life, creates it and organizes it; the student aims at the knowledge of the intrinsic meaning of phenomena, often with no immediate practical purpose in view. The qualities of character required for each type of life are discussed.—*J. Brockwell* (Brown).

4531. Cattell, R. B. *Temperament tests in clinical practice.* *Brit. J. med. Psychol.*, 1936, 16, 43-61.—Using tests of perseveration there was found to be a preponderance of extremely high and low "p" scores among children referred for delinquency or nervous difficulties. Among these 40 delinquents and 33 children with nervous difficulties, the "p" scores of the children who became more happily adjusted changed from extreme to moderate values, and the change was roughly proportional to the amount of recovery of stability of character. When 38 of the delinquents and 29 of the nervous children were given fluency of association tests, there was again a preponderance of high and low rather than middling "f" scores. Some with extremely high "f" scores changed directly to extremely low ones, but in those cases where complete adjustment took place there

was more convergence towards middle values than in less successfully adjusted cases.—*J. R. Hilgard* (Stanford).

4532. Copelman, L. S. *Psihodiagnostical Rorschach in lumina activitatii dinamice a scoartei cerebrale.* (Rorschach psychodiagnosis considered in the light of the dynamic activity of the brain.) Bucuresti: Societatea Romana de cercetari psihologice, 1935. Pp. 48.—A physiological and neurological interpretation of Rorschach's psychodiagnosis. The results which it furnishes depend upon functions of the brain, such as inhibition, excitation, irradiation and induction, which, as Pavlov has shown, take place on the surface of the brain. These processes vary with age, sex and temperament. They are different especially in the case of insane persons. There is a rather high correlation between processes occurring on the surface of the brain, temperament, and constitution.—*N. Margineanu* (Cluj, Rumania).

4533. Guilford, J. P., & Guilford, R. B. *Personality factors S, E, and M, and their measurement.* *J. Psychol.*, 1936, 2, 109-127.—The investigators have applied the new factor analysis, using Thurstone's centroid method including the rotation of axes, to the results of a questionnaire of 36 items, reputedly diagnostic of introversion-extraversion, which they had previously subjected to the old factor analysis. The new results show that 5 independent dimensions of personality can account for the obtained inter-correlations between the items. These are tentatively identified as: *S* (social introversion), *E* (an emotional factor), *M* (perhaps masculinity-femininity, or possibly a dominance or ascendance-submission factor), *R* (a *rhythymia*, or happy-go-lucky factor), and *T* (thinking introversion or intellectual leadership). Further work is being done to determine the nature of factors *R* and *T*, and to develop an inventory for their measurement. A long inventory intended to measure factors *S*, *E*, and *M* more reliably was devised. While its reliability is probably higher than that for the short one, the Spearman-Brown predictive formula was apparently not valid in this connection. Significant correlation between these 3 factors in the new questionnaire has led to the preparation of 3 new sets of scoring weights which should guarantee independence in the scales measuring factors *S*, *E*, and *M*.—*J. McV. Hunt* (Brown).

4534. Helwig, P. *Charakterologie.* (Characterology.) Leipzig, Berlin: Teubner, 1936. Pp. 295. RM. 8.60.—*R. R. Willoughby* (Brown).

4535. Holzinger, A. J. *Recent research on unitary mental traits.* *Character & Pers.*, 1936, 4, 335-343.—The tentative purpose of the unitary traits committee, appointed in 1931, was to seek out the unitary traits, say 1 to 20, which would accurately and adequately describe all of the primary factors in man's nature and enable one to calculate all of the derived traits. During the four years of existence of the committee, definite progress was made in perfecting statistical techniques, in improving tests, and in experimentation on children at the Thorp elementary school, Chicago, and at the Mooseheart (Illinois) schools. (For more



comprehensive reports see VIII: 3124; X: 646-650, 3041-3045.)—*M. O. Wilson* (Oklahoma).

4536. **Keilhacker, M.** *Charakterologische Aufsatzuntersuchungen.* (Studying character through essays.) *Z. angew. Psychol.*, 1936, 50, 149-182.—The subjects chose the three most interesting pictures in a given selection and wrote essays about the one of these three which the experimenter assigned. From analysis of the language employed four groups were differentiated. These consisted of essays in which content was dominated by the expression, in which content rather than language was the chief determinant, in which there was marked paucity of language, and in which the language was stylized by school training. At least three types were distinguished: concrete, abstract, and memorial. People dominated by language are consistently so. Much emotionality enters into the expression of the concrete type.—*H. D. Spoerl* (American International College).

4537. **Künkel, F.** *Conquer yourself; the way to self-confidence.* New York: Ives Washburn, 1936. Pp. 284. \$3.00.—*R. R. Willoughby* (Brown).

4538. **Landis, C.** *Questionnaires and the study of personality.* *J. nerv. ment. Dis.*, 1936, 83, 125-134.—The paper presents briefly the limitations and more obvious defects of the questionnaire method, situations and occasions where it is valid and informative, and certain uses where it is also the only known method of obtaining information. The questionnaire is rarely an accurate or adequate diagnostic instrument for the individual case, but there is no reason to believe that it may not be so refined that it will be useful in the individual diagnosis of character traits. Information obtained by this method is subject to the personal equation and the "halo effect," which indicates the necessity of equating the influence of such factors in interpreting results. No informative knowledge is absolutely certain. The uncritical use of statistical procedures adds a spurious reality to data which were originally none too accurate. Asking for an answer to a question the answer to which is really unknown will not result in any pertinent factual knowledge bearing on the question. The phrasing and meaning of questions are often open to wide variations. Each answer represents a judgment. The positive values of the questionnaire method may be summarized: (1) it gives a summary of self-evaluation or self-portraiture which opens the way for further individual analysis; (2) it affords a source of material for the study of the reality or lack of reality, in the psychological sense, of such concepts as emotionality, schizoid personality, justice, etc.; (3) it affords a way of arriving at generalized abstractions; (4) it provides a source of material which when properly handled should afford us a new and probably more efficient scheme of classification of human personality.—*C. R. Atwell* (Boston Psychopathic Hospital).

4539. **Masaki, M.** [One analysis of self-diagnosis.] *Jap. J. Psychol.*, 1936, 11, 38-59.—Self-diagnosis is understood in a double aspect, viz., self-diagnosis for oneself and self-diagnosis for others. 150 students of a high school were asked

about these aspects. Result: 14% of students think that they are comprehended by others as more extraverted than they think themselves to be. The author concludes that this fact is caused by a tendency to express the opposite of oneself before others, i.e., by a compensation.—*R. Kuroda* (Keijo).

4540. **Masaki, T., & Otomi, I.** *An experimental contribution to will-temperament test.* *Jap. J. appl. Psychol.*, 1936, 4, 79-90.—One's action attitude when interrupted, as is seen where a work process is unexpectedly disturbed by the ringing of a bell, has a special significance in the determination of will-temperament types. Instructions were to work till the experimenter's signal, with no attention to interruptions. In another experiment cards selected by O's on the basis of recognition were repeatedly discarded by the experimenter in order to determine the effect of rejection upon attitude. The authors maintain that these lines of research show that experimental procedure is useful in the study of types.—*R. Kuroda* (Keijo).

4541. **Mead, M., Cavan, R., Dollard, J., & Wembridge, E.** *Culture and personality.* *Amer. J. Sociol.*, 1936, 42, 84-87.—A brief discussion of the effects of culture upon the developing personality of the adolescent is put forth. Unless the role of culture in standardizing personality is first accurately known, any discussion of personality in adolescence is meaningless.—*J. Brockwell* (Brown).

4542. **Mielczarska, W.** *Rozwój typów oporu w domu i szkole.* (Development of types of resistance in school and at home.) *Kwart. psychol.*, 1936, 8, 117-140.—A questionnaire on resistance to other people was given to 185 girls, 11 to 19 years old, in secondary schools in Warsaw. The replies were classified according to causes of resistance under three headings, confirmative, protective and counter-suggestive, according to age and type of resistance, and according to age and home and school environment.—*T. M. Abel* (Progressive Education Association).

4543. **Niceforo, A.** "Profilii" grafici dei caratteri fisici e psichici di un individuo o di un gruppo. (Graphic profiles of the physical and mental characteristics of an individual or a group.) *Riv. Psicol. norm. pat.*, 1936, 32, 54-64.—The author discusses his researches in working out a profile of various personality traits of an individual or of a homogeneous group of individuals, in order to find out whether the individual or group can be considered normal or not. The profile may be used also to determine the correlation between different personality traits and the constitutional type of the individual represented.—*T. M. Abel* (Progressive Education Association).

4544. **Nestor, I. M.** *Studiul psihologic al scolarului cu ajutorul fiselor individuale.* (Personality inventories for school boys.) *Anal. Psihol.*, 1935, 2, 159-175.—A questionnaire on the use of personality inventories in school has been sent to various European psychologists: Spranger, Marbe, Lahy, Gemelli, Rubin, Ponzo, Klemm, etc. The main items of the questionnaire deal with the date at which such ques-

tionnaires were introduced, in what kind of schools they have been introduced, by whom have they been elaborated, what they contain, what results have been obtained, what is the opinion of the psychologist upon the problem, etc. Most European countries have introduced the personality inventory. In some countries it is compulsory, while in others it depends upon the teacher's choice. So far as the personality inventories have been introduced, they have been too long and so a burden to teachers. Consequently the teachers have completed them without paying them much attention. The observation of the boy in school should be completed by testing.—*N. Margineanu* (Cluj, Rumania).

4545. *Popoviciu, N. Omule, cunoaste-te.* (Man, know thyself.) Arad: Concordia. Pp. 268.—Ocular expression as a method of judging personality is treated. Three types of eyes are distinguished, to which three personality types correspond. They are: the theoretician, the practical man, and the artistic man.—*N. Margineanu* (Cluj, Rumania).

4546. *Schächter, M. Profilul psihologic al tuberculosilor.* (Psychological profile of the tuberculous.) *Anal. Psihol.*, 1935, 2, 132-136.—People suffering from tuberculosis have their own psychology. Their personality is affected by serious changes, which make them appear different from what they formerly were. Some critical comments on the researches of Muralt, Amrein, Kollaritz, Stern, Haase, Knopp, Ganter, Eiselt, Bochali, Melzer and Bernstein are included.—*N. Margineanu* (Cluj, Rumania).

4547. *Speer, G. S. The use of the Bernreuter personality inventory as an aid in the prediction of behavior.* *J. juv. Res.*, 1936, 20, 65-69.—The scores made on the Bernreuter personality inventory by 58 children referred to the Mooseheart Laboratory as having personality or character problems were compared with the scores made by a control group of 184 children presenting no special difficulties. No significant differences between the problem and non-problem children were noted in any of the four scales represented in the inventory. It is concluded that the Bernreuter inventory is of no value in the prognostication of personality or character problems in children.—*H. L. Koch* (Chicago).

4548. *Stephenson, W. Some recent contributions to the theory of psychometry.* *Character & Pers.*, 1936, 4, 294-304.—The author re-emphasizes his claim of previous articles (*Character & Pers.*, 1935, 4, 17-24; *Brit. J. Psychol.*, 1936, 26, 344-361) that personality types do exist. He defines type psychology thus: Whereas "psychometry is concerned with one trait or ability at a time, and a large population of persons, so type psychology is the converse, and concerns itself with one person at a time, for a population of traits." The method is that of correlating persons among themselves for a given population of traits. Type analysis should present three kinds of measurements about an individual—his types, his degree of typicality for such types, and his intensity for such types. The method is illustrated for a population of colors and one of psychic tempo traits.—*M. O. Wilson* (Oklahoma).

4549. *Strömberg, E. Om den ixothyme psyke.* (On the ixothymic psyche.) *Hospitalstidende*, 1936, 79, 637-648.—A general critical discussion of the problem of possible normal psychological correlates for the epileptic type of mind. It is maintained that Kretschmer simplifies his typology too much by narrowing his classification to the syntonic and the schizothymic types. The question of the existence of a normal psychological epileptic constitutional type (designated as the epithymic type by Hoffmann) has been given too little attention, with only 4-5 references so far in the literature. Three case histories from the writer's experience are given to illustrate this epithymic normal psychological type, which may be found in otherwise normal men and women of all degrees of native endowment and education. Bibliography.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

[See also abstracts 4381, 4621, 4651, 4671, 4699, 4702.]

## SOCIAL FUNCTIONS OF THE INDIVIDUAL

4550. *Baker, A. Recent trends in the Nordic doctrine.* *J. Psychol.*, 1936, 2, 151-159.—"Recent efforts of the Nordacists have brought their doctrine no nearer to consolidation; they have furnished no experimental proof, nor even achieved logical unity. The striking contradictions which have marked the doctrine from its beginning are still present. We find, then, that politically the Nordic doctrine has become an enormous success, but scientifically it remains the failure it had been."—*J. McV. Hunt* (Brown).

4551. *Baley, S. [The psychologist as court expert.] Arch. Kryminol.*, 1934, 1, 1-35.—The author examines minors who give evidence in lawsuits. The article is of interest for the psychology of testimony and for practical problems concerning the collaboration of psychologists and lawyers. The data used come from two sources, a mental examination (Binet-Terman) and a stenographic record of the verbal testimony. Of 54 children examined, 44 (of whom 42 were girls) gave evidence in cases dealing with sexual abuse in which they were the victims of an adult. 17 of the children were less than 11 years of age (youngest 4 years). The author believes that an accusation based on a child's testimony can be believed without other proofs. The reactions of the children toward the related event vary from complete indifference to an extremely emotional attitude, revealing a deep and lasting shock.—(Courtesy *Année psychol.*)

4552. *Bartholomew, W. T. The role of imagery in voice teaching.* *Proc. Music Teach. nat. Ass. (for 1935)*, 1936, 30, 78-94.—"Good voices" contain the vibrato, and are usually able to produce tones of more intensity than those of "poor" quality. "Good" male voices have a low formant of 500 cycles or lower produced in the pharynx and a high formant of about 2800 cycles, which constitutes the "ring." In the female voice the high formant is around 3200, but may be practically lacking in the coloratura type. Imagery is largely individual and variable. The

teaching of its use should rest on a proper knowledge of the acoustic, physiological and psychological factors in voice placement.—*P. R. Farnsworth* (Stanford).

4553. *Blumer, H. Social attitudes and non-symbolic interaction. J. educ. Sociol., 1936, 9, 515-523.*—"The view which I am suggesting in this discussion is that social life in human groups can be viewed in one of its aspects as a network of affective relations, operating in the form of expressive stimulation and impressive response. It is this nonsymbolic interaction which seems to form the setting for the formation of the feelings which are intrinsic to and basic to social attitudes."—*W. McTeer* (Wayne University).

4554. *Carrara, M. L'antropologia criminale e l'endocrinologia. (Criminal anthropology and endocrinology.) Arch. Antrop. crim., 1935, 55, 1014-1023.*—The author discusses the relations between the endocrinological constitution and the anthropological and psychological constitution as regards criminality.—*G. M. Hirsch* (Rome).

4555. *Ciafardo, R., & Diaz, A. Imputabilidad y constitución individual. (Penal responsibility and individual constitution.) Rev. Criminol., B. Aires, 1934, 21, 458-469.*—An application of the new biopsychological methods to legal procedures.—(Courtesy *Année psychol.*)

4556. *Faris, R. E. L. Sociological factors in the development of talent and genius. J. educ. Sociol., 1936, 9, 538-544.*—The present study is an attempt to solve the problem of the adequate environmental causes of genius "through intensive and intimate life histories gathered through interviews and written documents of talented persons. The subjects are young adults who are recognized by their acquaintances as outstanding in some gifts. . . . It is found that the most significant factors are relatively obscure and subtle, operating in the more private mental processes of the person, not easily observed . . . and not always closely correlated with the more obvious external environmental features." The author also emphasizes an isolated and inactive childhood on the part of a talented child, plus the chance discovery by the child of the possibility of amusing himself by practicing his specialty. Close association with adults in an appropriate culture center is a contributing factor also mentioned. A typical personal history for one case is given.—*W. McTeer* (Wayne University).

4557. *Fitzgerald, J. A. The overlap of child and adult vocabularies. J. exp. Educ., 1936, 4, 364-367.*—100 words of highest credit in Horn's basic writing vocabulary (words most commonly used in adult writing) were ranked in numerical order and a comparison of these rankings was made with the frequency rankings of these words in Ashbaugh's high school list and Fitzgerald's elementary school list. "Inspection shows that the rankings of the first 100 words of the high school and adult lists are a little more similar than those rankings of the adult and elementary lists. It seems evident, also, that the rankings of the most common words of the elementary and high school lists

are more similar than those rankings of the elementary and adult lists. Although there is a large overlap in the three vocabularies, there are differences particularly in marginal and infrequently used words. Not only are these differences shown by the appearance of different words, but they are also indicated by the occurrence and absence of various forms of the same stems in different lists."—*H. W. Karn* (Pittsburgh).

4558. *Foster, R., Frank, L., Mellers, J., Shuttleworth, F., & Thrasher, F. Institutional demands. Amer. J. Sociol., 1936, 42, 87-94.*—This is a brief analysis of institutional demands, restrictions and opportunities as they impinge upon the development of adolescents throughout the second decade. It is designed only to indicate the possibilities and need for research. The following eight divisions may be taken as representative: (1) family and household; (2) economic and business; (3) educational; (4) recreational and leisure time; (5) religious; (6) welfare and correction; (7) government and legal; (8) neighborhood and non-institutional demands.—*J. Brockwell* (Brown).

4559. *Friedmann, A. Das Frauenproblem der Gegenwart. (The woman problem of the present.) Int. Z. Individ.-Psychol., 1936, 14, 94-104.*—Contemporary ideas of manliness and womanliness presuppose masculine dominance. In the ancient matriarchy, which probably lasted longer than the historic times of patriarchy, a very different idea of the typical man and woman must have prevailed. Agriculture, spinning, weaving, pottery making, and other arts of civilization were begun by women while men hunted. Each individual's achievement is limited by his conceptions of manhood and womanhood. The hero role sometimes limits and discourages men as much as the passive role does women. The adaptability of women and their relative indifference to professional prestige make them better fitted to a time of panic and unemployment than men. Women are most experienced in human relations. Culture must be humanized, if the world is to be saved from its own destructive techniques. Man and woman are in equal danger, for technical equipment alters the value of bodily strength. The woman problem of the present is to transform the conceptions of womanliness and manliness, to make possible the new human being.—*M. F. Martin* (West Springfield, Mass.)

4560. *Gallmeier, M. Über die Entwicklung der Schülerschrift. (The development of pupil's handwriting.) Bierkebeck bei Freisung: Druckerei St. Georgsheim, 1934. Pp. 112.*—The argument of this inaugural dissertation is: Children's handwriting is not "childlike" in the sense of being spontaneous and creative. It is a painful imitation of a stereotyped copy conditioned by the limitations of child motility, and hence valueless as a criterion of character. An individual script presupposes some degree of personal maturity and is attained only when the writing movements have become automatically incorporated in the individual's settled and characteristic system of motility. The function of the school is to produce an



automatic, disciplined and pleasing script. Individual expression begins about the end of the elementary course under the influence of conscious or unconscious imitation of admired persons, automatization and simplification. This represents an educational and cultural advancement. Graphological deductions based on adult handwriting are inapplicable to children. Graphology as applied to them consists only in judging the stage of development and tracing the source of the imitative influences.—*M. E. Morse* (Baltimore).

4561. **Gallup, G. Measuring public opinion.** *Vital Speeches of the Day*, 1936, 2, 370-372.—It is claimed that the polls of the American Institute of Public Opinion are accurate to within 2%. Five controls are employed: ballots must be received (1) from each state in proportion to its voting population; (2) from country and city in correct proportion; (3) in proper ratio to income level; (4) from the correct number of persons who have come of voting age since 1932; and (5) from the proper proportions of those who voted for Roosevelt, Hoover, Thomas and others in 1932.—*P. R. Farnsworth* (Stanford).

4562. **Glover, E. War and pacifism: some individual (unconscious) factors.** *Character & Pers.*, 1936, 4, 305-318.—There is no explanation of war and peace other than a psychological explanation. The mind of man is constantly preoccupied with the problems of instinct tension, particularly those impulses for which there is no direct outlet, such as the destructive impulses. Here man alternates between the madness of projection and the fantastic creations of introversion. Except when there can be animal-like gratification of strong impulses of love, hate or self-preservation, man never ceases to use these primitive unconscious mechanisms. Over the most trivial detail of conduct or momentous crisis he exercises mental activities which were acquired during his first painful emergence from animal organization. By projection man attributes to others impulses which exist in himself. If projection results in flight it may be harmless, but if in attack it is one of the most destructive of human reactions. Regardless of the inhibition of primitive mechanisms, projection still takes its toll in persecution, subjection of the weak, crime, punishment for crime, and war.—*M. O. Wilson* (Oklahoma).

4563. **Glueck, E. T. Evaluative research in social work.** New York: Columbia Univ. Press, 1936. Pp. 27. \$0.25.—"How can evaluative criteria be developed in social work?" The practicability of such research is demonstrated by reference to follow-up studies of delinquents and criminals by the author and Sheldon Glueck. One of these studies, *500 Criminal Careers*, is examined at some length, with attention to the thinking processes involved and the actual methods developed for carrying it out. The value of this study in redefining goals and methods of treatment of the criminal is shown. The difficulties in such research are many, yet they are not insurmountable. The same type of research could be carried on in other fields of social work, providing

goals of treatment are redefined and simplified.—*H. E. Fairbanks* (Worcester, Mass.).

4564. **Gurnee, H. Elements of social psychology.** New York: Farrar & Rinehart, 1936. Pp. 467. \$2.50.—The author attempts a systematic presentation of selected data currently accepted in social psychology. The point of view is eclectic. The material is in general objective and experimental, although it is given a theoretical setting. The first chapter deals with the subject of methods, reviewing the prescientific method, systematic observations, the historical method, the questionnaire, rating scales, tests and statistics. There is a chapter on the learning of social habits, which is begun by a consideration of conditioned responses, continued by a treatment of basic concepts of trial-and-error learning, and concluded by a presentation of the subjects of insight, thought, imitation and tuition. Basic types of motivation are discussed. These types include: food seeking, temperature, escape, sex, protective motives, gregariousness, approval and disapproval, self-assertion, negativism, and submission. Varieties of emotional reinforcement are dealt with in the following order: fear, anger, disgust, love, jealousy, enthusiasm, joy and laughter. Depressing emotions, emotional habits and perception of emotional activity are other sub-titles. There follows, under the chapter heading of temperament and personality, a discussion of these sub-topics: emotionality, various aspects of introversion and extraversion, and theories of temperament. There is a chapter on the development of verbal activity. 29 pages are given to the subject of suggestion. An objective attack is made on the subject of social attitudes. There is an effective treatment of group behavior, ethical conduct and delinquency. The final chapter deals in a limited manner with esthetic and religious activities.—*C. R. Carpenter* (Bard College).

4565. **Harrison, M. L. Reading readiness.** Boston: Houghton, 1936. Pp. 173. \$1.20.—*R. R. Willoughby* (Brown).

4566. **Havermans, F. M. Eidetische verschijnselen in onze phylogenie?** (Eidetic phenomena in our phylogeny?) *Mensch en Maatsch.*, 1936, 12, 191-199.—Presents a social-psychological analysis of primitive thought life in a critical review of several currently recognized anthropological authorities, especially O. Menghin. Drawings found in the caves of southern France and on the island of Crete are accepted as the creation of totemic advanced hunters who still used the chips instead of the cores in preparing their stone implements. Every advancement in the preparation of weapons and tools was paralleled by an improvement in hunting methods. This step involved closer observation and clearer impressions of animals and their habits as well as more leisure for contemplation. Care of the human body, circumcision, and (sub-) incision of females, universally practiced in this period, point clearly to organized perceptions of humans as well as animals. The invocation of eidetic imagery in explaining the drawings is thus superfluous. Jaensch is criticized for invoking the

theory of recapitulation and for citing the drawings of an imbecile girl (from Bauman) in support of his position.—O. N. de Weerdt (Beloit).

4567. Huber, K. *Weg und Ziele neuer Volksliedforschung und Volksliedpflege*. (Method and purpose of the new study of folk-songs and their conservation.) *Mitt. Akad. wiss. Erforsch. Deutschtums*, 1934, H. 3, 281-295.—Huber discusses German folk-songs as an expression of the folk-soul and protests against the scientific and folk-lore approaches and romantic, "literary" and esthetic falsifications. All forms of "enlightenment" are hostile to them. They are the product of a "mysterious, impalpable Something," a half-unconscious reflection of all which at a given time moved the people to the depths, and historically a revolt of blood and soil against alien cultural interference. The methods for their study are geographical and statistical. Their conservation depends on a conscious back-to-the-soil movement as history repeats itself, a fostering of a living knowledge of the infinite variety of the depths of the German soul as expressed in primitive popular song.—M. E. Morse (Baltimore).

4568. Huber, K. *Zur psychologisch-akustischen Analyse der Sprachmelodie*. (Psychological and acoustic analysis of speech melody.) *Zentralstell. Sprachpflege Sprachk. Dtsch. Akad. München*, 1935, 26-38.—Comments on various phonograph records illustrating the characteristics of German speech melody.—M. E. Morse (Baltimore).

4569. Inui, T. [A critical experiment of graphology.] *Jap. J. Psychol.*, 1936, 11, 60-80.—Rough and fair copies written by 40 schoolboys were presented to S's in order that they might judge the characters of the writers. Coincidence of judgments on two copies by the same writers is 61% of all. Boys whose rough and fair copies were written very differently seem to be so-called "questionable children." The attitude of judgment is very important in guessing the character of a writer. A logical attitude gives the worst result; the best is one in which judgment is made by the writing rhythm. To estimate the speed of writing on the basis of the stroke, contrary to the belief of all graphologists, is difficult. Several experiments were conducted by means of films and apparatus registering pressure in writing.—R. Kuroda (Keijo).

4570. Junod, C. *Recherches sur la facilité de langage*. (Investigations on the fluency of speech.) *Cah. Pédag. exp.*, No. 2, 1934. Pp. 16.—Discussion of group tests (synonyms, etc.) and individual tests (time taken for designating objects, for describing a scene, etc.). Results are given for converting scores into centiles; there is no description of the population to whom the tests were given.—(Courtesy *Année psychol.*)

4571. Kanstein, E. K. *Über Gewohnheitsverbrecher*. (The violator of the mores.) Munster: Feldmann, 1935. Pp. 88.—R. R. Willoughby (Brown).

4572. Kirkpatrick, C. *Student attitudes toward marriage and sex*. *J. educ. Sociol.*, 1936, 9, 545-555.

—A review of the literature (1925-1935) touching on the topic of student attitudes towards sex and marriage. Studies are cited which throw light on the nature and origin of prevailing attitudes. Recent interest in the modification of student attitudes in this field is noted and obstacles to such modification are pointed out. 28 references are given.—W. McTeer (Wayne University).

4573. Kwalwasser, J. *The composition of musical ability*. *Yearb. nat. Soc. Stud. Educ.*, 1936, 35 (Part II), 35-42.—Musical talent "is a complex hierarchy of talents which, operating in various combinations, may produce a musical response." A suggested outline of talents would include musical sensitivity with both simple forms of impression and complex forms of appreciation, musical action with a natural capacity for skill in the accurate and musical production of tones in the control of pitch, intensity, time, rhythm, timbre and volume, a musical memory and imagination, musical intellect and musical feeling. General intelligence seems to have little or no significant positive correlation with musical intelligence. Sex differences in music test scores vary according to countries; European boys score higher than girls, while in America the reverse holds true, which may be attributed to the condescending attitude of boys towards music here. While there is considerable improvement of music test scores with age, the superior young child generally becomes the superior adolescent and the inferior child remains inferior. Training tends to attract those who possess musical talent, although it does not guarantee to develop real musicianship.—P. S. de Q. Cabot (Simmons).

4574. LaPiere, R. T., & Farnsworth, P. R. *Social psychology*. New York: McGraw-Hill, 1936. Pp. 504. \$3.50.—The purpose of this book is to consolidate findings of common interest in psychology and sociology and to demonstrate important relationships between the fields. Part I deals with the nature of the individual and society. The authors use an historical and theoretical approach. They consider the border-line subjects of heredity, maturation, motivation, emotional behavior, and learning. The authors give a socio-psychological treatment of topics of group membership and social heritage. Part II deals with the processes of socialization. Symbolic behavior is discussed under the headings of gestures and speech, whereas non-symbolic behavior is considered under the sub-topics of people, the human model, model shifting, ideas, and social change as it relates to (1) symbolic models and (2) composite models. There follows a discussion on the dynamics of social adjustment. Human personality is the subject of Part III. The authors give basic concepts of individuality and review critically the question of "stereotyping" personalities. The theme is continued by a treatment of the description and measurement of personality, with special attention to attitudes and qualities of motivation. The general topic of personality differences is the subject of Part IV. The main subjects are: human nature, individuality, the maladjusted personality, and the psychopathic per-

sonality. More specifically, the following topics are dealt with: race and sex differences, personality traits and their classification, the criminal and the sexually maladjusted, the unsocial, concepts of normality, and various forms of maladjustment. Part V deals with the situational nature of social behavior. Social interactions are analyzed in relation to total situations, and these are classified. In the final chapter the authors deal with abnormal social situations, such as frantic audiences, mobs, riots, booms, panics, and revolutions. Following each chapter there is an appendix which includes notes and a large number of pertinent references.—C. R. Carpenter (Bard College).

4575. Lewin, K. **Some social-psychological differences between the United States and Germany.** *Character & Pers.*, 1936, 4, 265-293.—Space of free movement of an individual or a group is represented as a topological region encircled by other regions that are inaccessible because of either social prohibition or lack of ability. In these terms certain differences between the U. S. A. and Germany are discussed. American exceeds Germany in the freedom and independence accorded the child in education; in variability of freedom within and sharpness of boundaries between educational and other social regions; in the social proximity of individuals, especially within the surface or peripheral layers; in the range and number of regions within which the individual is of public interest; in the extent to which there can be close personal relationships without personal friendship; in the extent to which pragmatism prevails over idealism in the degree of similarity of members of different groups; and in the extent to which behavior varies in different situations.—M. O. Wilson (Oklahoma).

4576. Lindner, R. **Vererbte Sprechbewegungen bei Taubgeborenen.** (Inherited speech movements in the congenitally deaf.) *Schr. Dtsch. Ges. Tier- u. Ursprachforschung.*, 1935, No. 5. Pp. 8.—R. R. Willoughby (Brown).

4577. Manunza, P. **Disordini del linguaggio in un amputato, mancino di necessità.** (Language disorders in a man with an amputated right arm who became left-handed.) *Atti Soc. Sci. med. nat. Cagliari*, 1935, No. 2.—A purely functional disturbance is described in a man who, when his right arm was amputated, patiently and voluntarily trained himself to use his left arm. His language disturbances, however, were largely reduced as the use of his left arm became more nearly perfected. These disturbances seem to have been due to a functional schism and to interferences between the normal phasic and graphic centers on the left side and the new centers which were being developed on the right side because of the use of the left arm. Further medico-legal considerations are given.—G. M. Hirsch (Rome).

4578. Marguglio, D. **Delinquenza e psicopatologia minorile.** (Delinquency and the psychopathology of minors.) *Riv. sanit. sicil.*, 1935, No. 12, 926-939; 1004-1016.—Marguglio discusses the usefulness of the study of individuals before they actually become delinquent. He also deals with the detection of

criminals, the different forms of delinquency, and the uses of psychopathic records. He wishes to find the means of prevention of crime in the individual and in social groups, and he discusses the different categories of criminals.—G. M. Hirsch (Rome).

4579. Möhle, L. **Eine empirische typenpsychologische Untersuchung über Arten religiösen Erlebens.** (An empirical type-psychology investigation on the types of religious experience.) Leipzig: Noske, 1936. Pp. 51.—R. R. Willoughby (Brown).

4580. Niceforo, A. **Homo loquens.** (Man as speaker.) *Riv. Psicol. norm. pat.*, 1936, 32, 65-71.—The author summarizes the main conclusions he has drawn on the subject of the biological, psychological and environmental development of a particular language as a weapon of defense and offense in a given social group.—T. M. Abel (Progressive Education Association).

4581. Plewa, F. **Die Stellung der Frau zur Gesellschaft.** (The position of woman in society.) *Int. Z. Indiv.-Psychol.*, 1936, 14, 104-118.—A human being can have three possible relations to society: (1) the passive, functional, or vegetative relation, (2) the antisocial, or (3) the cooperative. The universal human desire to accomplish something is not adequately satisfied by motherhood, because the child is something given, not something the mother can shape freely from a formless material. Women need more opportunities for creative work. Traits commonly regarded as feminine are merely symptoms of discouragement. Many women regard a husband as a necessary evil. In the future both sexes must build together as equals.—M. F. Martin (West Springfield, Mass.).

4582. Robinson, R. **Leisure time activities of New York's lower west side.** *J. educ. Sociol.*, 1936, 9, 484-493.—Diary schedules covering a period of four days in early spring were obtained from 1100 junior high school children (75% foreign parentage). On analysis it was found that the most frequently reported leisure time activities were, in order, listening to radio (chiefly entertainment features), attending motion pictures (84% of which were considered unsuited to children), reading (tabloid newspapers, five-cent magazines, adventure story books) and spending time outdoors (84% unsupervised play on the streets).—W. McTeer (Wayne University).

4583. Roco, D. **Martorul si opinia publica.** (Witness and public opinion.) *Anal. Psihol.*, 1935, 2, 127-131.—A witness depends largely upon public opinion. Public opinion, however, pays little attention to the facts as they really are; it exaggerates and transforms them in order to make them more sensational. The witness should therefore be freed from the influence of public opinion. The judge needs much tact in appreciating the real nature and significance of testimony. In order to improve his tact he needs an adequate psychological training.—N. Margineanu (Cluj, Rumania).

4584. Sauvageot, A. **La notion de temps et son expression dans le langage.** (The notion of time and



its expression in language.) *J. Psychol. norm. path.*, 1936, 33, 19-27.—Western European grammars are accustomed to distinguish several tenses of verbs. The tense is supposed to be a function of the duration of the action. Difficulties, however, arise when a western grammarian attempts to explain the concept of tense in the Slavic languages. The author was interested in studying the thoughts of those people who use non-temporal or unusual temporal expressions. During an 8-year residence in Hungary the author learned that the Hungarian thinks of time otherwise than does a Frenchman. Although the Hungarian language has a system of conjugations similar to the French, one finds certain tenses, such as the pluperfect, used by only a few authors or by people whose contact with western languages and civilization has given them a more precise consciousness of time. To illustrate this he gives examples of mistakes that Hungarians make when trying to speak French. He claims that psychologists could learn much about the thoughts of men by studying their use of language.—*R. E. Perl* (New York City).

4585. Schoen, M. Report of the committee on music tests and measurements. *Proc. Music Teach. nat. Ass. (for 1935)*, 1936, 30, 320-350.—A critical review of (1) recently published studies on the effects of music by Kate Hevner, R. H. Gundlach, P. E. Vernon, and C. H. Wedell; (2) studies on the singing voice by W. T. Bartholomew and by S. K. Wolf, D. Stanley and W. J. Sette; and (3) studies of music tests and measurements by H. E. Sanderson, Keith Sward, L. M. Tilson, F. W. Crichfield, A. D. Hill, and P. R. Farnsworth.—*P. R. Farnsworth* (Stanford).

4586. Skinner, B. F. The verbal summator and a method for the study of latent speech. *J. Psychol.*, 1936, 2, 71-107.—"The verbal summator is a device for repeating arbitrary samples of speech obtained by permuting and combining certain elemental speech-sounds." To be used either as a sort of verbal ink-blot in a test where the number of repetitions corresponds to the time of exposure for a Rorschach blot, or as a method of measuring the latent strength of verbal material, use of the summator is based upon two principles familiar for non-verbal material, namely, a tendency to imitate and a tendency for two responses having similar form to summate. In constructing samples of speech sounds an optimal point was sought between extremes of complete differentiation and no differentiation. Samples were constructed from permutations of 6 vowels ( $\bar{e}$ ,  $\bar{a}$ ,  $\bar{i}$ ,  $\bar{u}$ ,  $\bar{o}$ , and  $\bar{ö}$ ) and a seventh ( $\bar{u}$ ) utilized for all unaccented syllables in order to preserve temporal and intensive properties of speech. Samples have been recorded on 12-inch aluminum disks, 50 on a face, for reproduction on a standard electric phonograph. A repeating device is described which serves to repeat a given sample every 3 seconds.  $S$  is instructed indirectly, i.e., is told that short samples of speech are to be reproduced and is asked to identify them. An isolated block of 1000 responses from 20  $S$ 's is described, showing: that duplication of responses is satisfactorily infrequent, that average responses contain fewer syllables

than average samples, that phonetic distortion in responses is great, that the distribution of words obtained with the summator closely resembles that in normal speech, etc. Sample protocol is included.—*J. McV. Hunt* (Brown).

4587. Thrasher, F. M. The boys' club and juvenile delinquency. *Amer. J. Sociol.*, 1936, 42, 66-80.—The boys' club study, using descriptive, ecological, statistical, and case-study methods, showed that this particular club during its first four years was not an important factor in delinquency prevention. Although it did not reach a large number of the boys it was designed to serve, it did succeed in enrolling a more "under-privileged" class of boys, probably including more potential delinquents than among the non-members of the same age groups. As might be expected because of the types of boys enrolled, the boys' club delinquency rates were higher than those of the community in general. The increasing delinquency rate among club members, however, appeared to be the result of increasing age rather than the effect of participation in the club activities. The boys' club has an essential function to perform as a unit in a concerted community program designed to achieve crime prevention rather than as a single preventive agency.—(Courtesy *Amer. J. Sociol.*)

4588. Toussaint, N. Bilinguisme et éducation. (Bilingualism and education.) Brussels: Lamartin, 1935. Pp. 300. 35 fr. belg.—The book covers the following subjects: (1) an account of the situation in different European countries, particularly for populations in which the children are bilingual (i.e., where the school instruction is in a different language from that of the home); (2) a résumé of the different publications on this subject, especially the experimental studies which have been made in England, Holland, Belgium, Germany, and Spain (Barcelona); and (3) an account of an experiment carried out in Belgium by the author. 36 monolingual Walloon and 36 monolingual Flemish children (3 boys and 3 girls for each of the six primary grades) and 50 bilingual children were used. Tests were made of their educational achievement, and a psychological examination was made covering their different aptitudes (the Vermeylen tests). Half of the bilingual children were inferior to the monolingual ones in both tests, the greater difference being found in educational achievement. Two-thirds of the bilingual children were from 13 to 16 years of age, representing a retarded scholarship condition. The correlation between the two tests was .25. The author concludes that bilingualism, as shown in the above tests, is bad for the children and that it is necessary to arrange instruction to take account of the bilingual situation.—*R. Nihard* (Liège).

4589. Travis, L. E., & Knott, J. R. Brain potentials from normal speakers and stutterers. *J. Psychol.*, 1936, 2, 137-150.—To determine the relationship, if any, between stuttering and the activity represented by cortical potentials, a total of 3533 brain potentials selected from the records of 19 normal speakers and 17 stutterers obtained with

needle electrodes (one over left visual area, other over left motor area) were evaluated in terms of duration and amplitude of the individual waves. Statistically significant differences were found between normal speakers and stutterers, but interpretation is reserved until further observation and experimentation have been carried out. Two severe stutterers gave unusually large spiked waves during complete tonic spasms, generally without voice. Control experiments indicated that these discharges were from the motor area and were not related to motor activities incident to or symptomatic of the spasm, insofar as those activities and symptoms can be voluntarily reproduced. In agreement with Gibbs, Davis, and Lennox, the investigators found that the distributions of the waves were continuous and unimodal rather than bimodal as implied by Berger.—*J. McV. Hunt* (Brown).

4590. Trubetzkoy, N. *Essai d'une théorie des oppositions phonologiques*. (A theory of phonological contrasts.) *J. Psychol. norm. path.*, 1936, 33, 5-18.—Psychology and philosophy have already rendered a service to the study of phonology, and the author feels that phonology can be of use to psychologists and philosophers. The study of many languages has convinced him that a very complex classification is necessary for phonology. Oppositions or contrasts of the sort that are bilateral, proportional, neutralizable, privative, on the one hand, and those that are multilateral and isolated on the other, are the two extremes of the classification. The degree of coherence and of symmetry of a phonological system depends on the numerical distribution of the different types of contrasts.—*R. E. Perl* (New York City).

4591. Vervaeck, L. *La collaboration des psychiatres à la prophylaxie criminelle*. (The collaboration of psychiatrists in crime prevention.) *J. belge Neurol. Psychiat.*, 1936, 36, 163-171.—The author presents a report of a meeting held in Paris in December, 1934, for the purpose of founding an international federation for the study and carrying out of crime prevention, together with a list of the participants. A program of activities that would seem advisable is given, as well as some of the recommendations by the various sections. The author concludes with a statement of his own views in regard to the various measures that may be effective in the prevention of crime.—*H. Sys* (Cornell).

4592. Wieman, R. W. *Popularity*. New York: Chicago: Willett, Clark & Co., 1936. Pp. 132. \$1.00.—"Popularity is the state of 'belonging'; of being an accepted part of those social groups which we feel are worth while. It is not a luxury; it is a vital necessity." The writer discusses the causes of popularity and unpopularity—how to achieve the former and avoid the latter.—*J. Brockwell* (Brown).

4593. Witty, P. A., & Kopel, D. *Causation and diagnosis of reading*. *J. Psychol.*, 1936, 2, 161-191.—The writers review critically 80 titles. They examine and evaluate factors associated with poor reading and describe a technique for diagnosis in each case, emphasizing only those items which are essential in

adequate appraisal of reading difficulty and practical in typical schoolroom management. They conclude that most of the etiological explanations of poor reading are regrettable because reading has not been conceived "as a thinking enterprise—demanding the use of creative intelligence in situations inextricably associated with the total complex development of the growing child."—*J. McV. Hunt* (Brown).

[See also abstracts 4368, 4410, 4412, 4438, 4441, 4446, 4452, 4460, 4513, 4541, 4624, 4628, 4634, 4658, 4670, 4700, 4701, 4712, 4716, 4721, 4724, 4752, 4755.]

## INDUSTRIAL AND PERSONNEL PROBLEMS

4594. Chalaron, C., & Moise, M. *Auto mechanics*. New York: National Occupational Conference, 1936. Pp. 7. \$.10.—The pamphlet is an appraisal and abstract of available literature on auto mechanics as an occupation. It summarizes briefly what is known about this occupation from a national point of view. It also contains a brief bibliography.—*J. Brockwell* (Brown).

4595. Christiaens, A. G. *L'orientation professionnelle en Espagne*. (Vocational guidance in Spain.) *Bull. Off. intercommun. Orient. prob.*, 1934, 14, 1-34.—This issue is devoted entirely to the documents used in the Vocational Guidance Bureau in Spain: admission, family, and scholastic records; intelligence tests; guidance, physiological, and medical records; tests of judgment. They are reproduced extensively.—(Courtesy *Année psychol.*)

4596. Eliasberg, W. *Zur Kulturgeschichte der Psychotechnik*. (The cultural history of psychotechnology.) *Kwart. psychol.*, 1936, 8, 89-110.—The author gives an account of various approaches to psychotechnology from ancient to modern times, and an analysis of the practical difficulties of carrying out psychotechnical measurements.—*T. M. Abel* (Progressive Education Association).

4597. Gemelli, A. *Predisposizioni psicofisiologiche agli infortuni sul lavoro e selezione preventiva*. (Psychophysiological predispositions to accidents at work and preventive selection.) *Rass. Med. Lav. industr.*, 1934, 13, 504-515.—No general common factor has been found up to the present time in the researches on the character of the predispositions to accidents existing among workers. New investigations are necessary, with determination of the biotypological profiles of those predisposed to accidents.—(Courtesy *Année psychol.*)

4598. Gemelli, A. *Intorno alli applicazione dei "tests" mentali alla selezione industriale*. (Concerning the application of mental tests to vocational selection in industry.) *Riv. Psicol. norm. pat.*, 1936, 32, 27-36.—A discussion of the difficulties of working out, applying and interpreting mental tests as a means of vocational selection in industry.—*T. M. Abel* (Progressive Education Association).

4599. Golovnin, T. L., & Shustin, N. A. [An experiment for studying the efficiency of night labor.] In [The psychophysiology of industrial work].

Leningrad: 1936. Pp. 131-142.—An experiment made among men laborers of a leather factory and among women workers of leather and confectionery factories yields the following principal conclusions: (1) The functional conditions of the human organism during the night-shift work in general are within the limits of the normal. (2) The subjective estimation of work in the night shift does not quite correspond to the objective data of estimation of the physiological condition and the productivity. Nearly all the workers declare that work in the night shift is the hardest. (3) The average productivity of labor in workers (men) in the night shift was somewhat higher than in the day shift. (4) In women workers the productivity in the night shift is lower than in the day shift. (5) A shower bath taken during the dinner interval (directly before dinner) in the night shift showed considerable effectiveness. (6) Physical culture exercises taken during the short intervals in the night shift assisted the increase of working capacity of the workers, as well as that of their discipline and organization in work.—A. Yarmolenko (Leningrad).

4600. Haggard, H. W. *Work and fatigue.* *Mech. Engng.* N. Y., 1936, 58, 298-301.—Muscular efficiency was determined at hourly intervals throughout the day on a number of subjects. A falling off of production and a feeling of fatigue, developing late in the morning and late in the afternoon, could probably be relieved by taking food. In the factory it was observed that during the periods when the two extra meals were given the production of the experimental group rose approximately 10%. The workers commented that on the days the extra meals were given they felt less tired, in spite of the fact that they were actually doing more work.—H. A. Copeland (Cincinnati Employment Center).

4601. Kano, H. *An investigation of workers liable to meet accidents.* *Jap. J. appl. Psychol.*, 1936, 4, 67-78.—Accidents caused by bad external conditions or by errors of others are seen very frequently in workers who are injured once, and less frequently in habitually injured ones. Accidents originating from one's own errors are in the majority, though there is no significant difference between the habitually injured and workers injured once with respect to accidents due to mere carelessness or neglect. Accidents attributable to extreme carelessness or simple failure are, however, much more frequently seen in the habitually injured.—R. Kuroda (Keijo).

4602. Krijanskaya, D. A. [Investigation of the visual acuity in the drawing-in shop.] In [*The psychophysiology of industrial work*]. Leningrad: 1936. Pp. 213-223.—The investigations were made with the aid of Kunevich and Haffkin's apparatus. The data obtained as a result of a lengthy investigation (several times during the working-day) of the visual acuity of drawers-in and handers-in showed that the visual acuity in the women workers decreases only slightly during the working day. The greatest decrease occurs at the end of the working day, in the

third and fifth hours of work. During the dinner interval the visual acuity recovers somewhat. The author considers that visual fatigue must be attributed to strain and changes occurring in accommodation and convergence apparatus of the eyes.—A. Yarmolenko (Leningrad).

4603. Laird, D. A. *How to use psychology in business.* New York: McGraw-Hill, 1936. Pp. 387. \$4.00.—R. R. Willoughby (Brown).

4604. Levine, J. G. *What makes an aviator?* *Med. Rec.*, N. Y., 1936, 143, 463-464.—The author discusses the attributes essential in the development of capable aviators, treating the subjects of physical constitution, physical types, "flying instinct," age factors, and the psychological background of the individual.—M. H. Erickson (Eloise Hospital).

4605. Liberman, M. M., Egorova, N. F., & Tochilov, K. S. [An experiment in rational organization of doffers' work on continuous-spinning machines.] In [*The psychophysiology of industrial work*]. Leningrad: 1936. Pp. 78-99.—In the spinning industry considerable losses occur owing to cyclically repeated stoppages of continuously spinning machines, which are stopped for the purpose of doffing worked out fabric. It is particularly essential, therefore, to keep to the exact time norms allowed for the doffing operations. The chief datum for a successful solution of the problem was a proper analysis of the industrial labor situation in the shop, which enabled the investigators to disclose organizational and psychological factors which lay at the bottom of the non-fulfilment of the technically possible norm of doffing. It was possible in accordance with this to plan practicable and efficient measures of organizing the work of doffers.—A. Yarmolenko (Leningrad).

4606. Liberman, M. M., & Grineva, K. A. [An experiment of active training of professionally important psychophysiological functions in knitting.] In [*The psychophysiology of industrial work*]. Leningrad: 1936. Pp. 100-130.—The authors made an experiment on training of complex psychophysiological functions, a high development of which is in direct relation to the productivity of labor of women knitting workers and the productivity of machines tended by the latter. Four fundamental psychophysiological functions were set apart which ought to be highly developed in knit-goods women workers. Special methods were worked out, which consisted accordingly of four series of exercises. Series I, for training functions connected with the correct organization of the operation of changing the spools, consists of about 30 exercises. Series II, for training functions of simultaneously surveying several objects (distribution of attention), contains 30 numbers. Series III involved the construction of methods of training functions connected with the process of correct subjective estimation of the quantity of work needed for the operation to be performed. Series IV, the system of training the functions of a swift psychophysiological transition from the fulfilment of one operation to the fulfilment of another, is based on a systematic carrying out by the person under training, in laboratory



conditions, of a swift transition from one task to another at a signal given by the experimenter. The whole series contains 35 exercises calculated to be worked up within three hours. For the purpose of estimating the efficiency of the experiment, objective control indicators were collected directly at the works. It turned out that the general stoppages diminished from 164.5 minutes to 124.7 minutes, i.e. by 24.2% per set, on the average.—A. Yarmolenko (Leningrad).

4607. Lieb, A. Verhalten und Gefahr. Zur Psychologie der Schadenverhütung. (Behavior and danger. Contribution to the psychology of accident prevention.) *Schr. Dt. Ges. Schadenverhütung*, 1935, 1.—R. R. Willoughby (Brown).

4608. Lintvarev, V. S. [On the motor reaction of tractor operators and workers on the "combine."]  
*Sovetsk. Psikhotekh.*, 1934, 7, 61-66.—There has been a tendency to stress the importance of the speed of simple reactions in occupations such as automobile driver. Reactions to visual stimuli are usually studied, although auditory stimuli play at least an equally important role in work with a tractor or "combine." Experimental findings (a modified Tramm apparatus was used) on 192 subjects indicate that the reaction time to auditory stimuli is longer in subjects holding responsible positions. Good apprentices react very rapidly at first, but after learning their reactions come more slowly and at the same time the number of errors decreases. It is not the speed but the quality of the reaction which is important. The diminution of the speed in a choice reaction is not in accord with the speed of the simple reaction; the latter is modified by exercise.—(Courtesy *Année psychol.*)

4609. Menesini, G. Lo stato d'animo dell' infortunato. (Osservazioni pratiche.) (The state of mind of the accident victim. Practical observations.) *Rass. Soc.*, 1935, No. 3, 11-28.—G. M. Hirsch (Rome).

4610. Nestor, I. M. Aspectele psihotehnice din Polonia, U.R.S., Finlanda, Letunia si Austria. (Psychotechnical institutions in Poland, Russia, Finland, Lithuania and Austria.) Bucuresti: Societatea romana de cercetari psihologice, 1936. Pp. 64. Lei 45.—Contents: (1) vocational guidance for youth; (2) vocational guidance for adults; (3) vocational selection; (4) scientific management of labor; (5) psychotechnical applications to social life in the countries mentioned in the title. The present situations of the institutions designated to apply psychology to social and economical life are indicated.—N. Margineanu (Cluj, Rumania).

4611. Pence, E. M. An appraisal and abstract of available literature on city and county management as an occupation. New York: Nat. Occup. Conf., 1936. Pp. 7. \$10.—The pamphlet summarizes what is known about this occupation from the national point of view. The abilities essential for success, preparation necessary, advantages and disadvantages of the occupation, etc., are discussed. 37 articles are included in the bibliography.—R. Goldman (Worcester State Hospital).

4612. Poliakova, M. G. [Investigation of tremor in spinners and doffers of the jute-spinning industry.] In [*The psychophysiology of industrial work*]. Leningrad: 1936. Pp. 227-233.—Observations which lasted 1½ months were made three times a day: (1) before the beginning of the work; (2) before the dinner interval; (3) at the end of the work. The subjects were nine spinners and seven doffers. Besides the usual record, tremor was also recorded after giving a functional task, consisting of work on an ergograph. Tremor increases in spinners throughout the working day. The individual peculiarities of the women workers are revealed during the initial observation before the beginning of work as well as in the intensiveness of reaction to industrial work.—A. Yarmolenko (Leningrad).

4613. Poliakova, M. G. [Investigation of tremor in motor and hand sewing machine women workers of the sewing industry.] In [*The psychophysiology of industrial work*]. Leningrad: 1936. Pp. 263-276.—Observations were made daily on 7 women workers of the morning and evening shifts during 3 weeks, 6 times a day, at definite periods of time. In tremogram records made before the beginning of the work individual differences were revealed in the course of the tremor curve as well as in the length of the oscillations. Posture reaction of the central nervous and muscular systems of the motor apparatus is revealed 20 minutes after the beginning of the work through an increase of the length of the tremor curve and the amplitude of the oscillations of the first kind. Work in the evening shift is marked by a less regular course of the tremor changes.—A. Yarmolenko (Leningrad).

4614. Prosser, C. A., & Prosser, W. L. An appraisal and abstract of available literature on plumbing as an occupation. New York: Nat. Occup. Conf., 1936. Pp. 8. \$10.—A review of the literature dealing with the work done by the plumber, the abilities and qualifications required, the preparation necessary, the future of the occupation, and the advantages and disadvantages. The bibliography contains 41 titles, with comments regarding the value of each.—R. Goldman (Worcester State Hospital).

4615. Radulescu-Motru, C. Psihotehnica si munca nationala. (Applied psychology and national work.) *Anal. Psihol.*, 1935, 2, 1-16.—The origin of division of labor is discussed. Changes have been produced by modern civilization. Applied psychology is an instrument of vocational guidance and scientific management of labor. Medical examination is not sufficient. It has to be completed by psychological examination. This examination should be made by psychologists and not by engineers, as sometimes happens. The engineer has his part in the scientific management of labor, in the studies of movements and their organization, but he should also be assisted by a physician and a psychologist. The new Rumanian law of labor and vocational training and the important role attributed to applied psychology is treated; the law requires medical and psychological examinations as main criteria in vocational guidance. It also provides the foundation of some institutes of

labor, designated mainly for psychological research. Applied psychology should concern not only the individual, but also the social environment. Psychological examination should be introduced in schools. Persons applying for vocational guidance should come with their psychological profiles made by the teachers.—*N. Margineanu* (Cluj, Rumania).

4616. Shustin, N. A. [Labor and rest.] In [*The psychophysiology of industrial work*]. Leningrad: 1936. Pp. 11-60.—The investigation of the labor and rest regime in thirty light-industry factories in Leningrad enables us to establish a number of theses: (1) Inasmuch as the dinner interval is meant not only for taking food, but also for rest, the time fixed therefor must be inseparably connected with the arrangement and length of additional intervals. (2) As expected, no complete restitution of psychophysiological functions as a result of the dinner interval was observed in all investigated factories. (3) The ordinary causes of the low restorative effect of dinner intervals are: (a) the untimely arrangement of dinner intervals, i.e., the lack of conformity thereof with the laborer's need of taking food and rest, (b) the insufficient duration of dinner intervals, (c) the wrong use thereof. (4) Taking into consideration the established principles of regulation of labor and rest periods and on the basis of examination of seamstresses (motor and hand work) a graph of alternation of periods of labor and rest has been worked out for sewing enterprises. (5) The actual rest in the existing arrangement is an arbitrary value depending on a great number of various factors, many of which in turn are either arbitrary or accidental. (6) The most objective criterion for establishing a rational working-day regime is the curve of working capacity. (7) The activation of rest is of great importance in the problem of rationalizing the working-day regime. (8) The most fundamental selection of a working-day regime in each concrete case can be made only on the basis of a detailed analysis and the study of all industrial conditions of work by experimental methods.—*A. Yarmolenko* (Leningrad).

4617. Shustin, N. A., Golovnin, T., & Gopeliovich, B. [Reconstruction of the working place of the drawers-in.] In [*The psychophysiology of industrial work*]. Leningrad: 1936. Pp. 61-77.—With a view to removing the established defects a number of measures were taken, based on physiological premises, for a rational arrangement of the working place (the construction of a new chair, rationalization of separate parts of the loom causing abnormal working postures and working movements). An estimation of the efficiency has shown that after an experimental introduction of a rationalized working place, the productivity of the women workers began to rise gradually.—*A. Yarmolenko* (Leningrad).

4618. Shustin, N. A., & Harechko, E. I. [Psychophysiological investigations of the efficiency of industrial physical culture.] In [*The psychophysiology of industrial work*]. Leningrad: 1936. Pp. 78-99.—Two groups of women workers (weavers) were taken under observation: (1) an experimental group which

performed physical exercises during 8-10 minutes before the beginning of work (setting-up exercises) and during 5-7 minutes at the beginning of the dinner interval; (2) a control group of women workers who did not perform any physical exercises, but who worked and were examined under conditions exactly similar to those of the experimental group. Industrial physical culture improves the psychophysiological condition of the women workers and makes them feel better. During the period from August (second half) till October (first half) the group of women workers who practised physical exercises yielded much better results than the control group; whereas the control group of women workers increased their productivity toward the close of the second month (October) by 4.3% (as compared to August), the women workers who had practised physical exercises increased their productivity for the same period by 17%.—*A. Yarmolenko* (Leningrad).

4619. Terrien, F. L'O. P. en fonction du degré de vision. (Vocational guidance as a function of the degree of vision.) *Bull. Inst. nat. Orient. prob.*, 1934, 6, 233-247; 265-277.—A classification of the visual abilities distinguishes three types; their job suitabilities are considered.—(Courtesy *Année psychol.*)

[See also abstracts 4350, 4492, 4690, 4693.]

#### EDUCATIONAL PSYCHOLOGY

4620. Avent, J. E. *Standard testing reduced to its lowest terms.* Knoxville, Tenn.: Author, 1936. Pp. 266 + xii. \$3.50.—This book analyzes the testing program into detailed steps, which are made simple enough for any classroom teacher to follow. It comprises six complete testing programs, as follows: first program, grades 1, 2, and 3, for which the Kuhlmann-Anderson intelligence test and the Metropolitan achievement tests are used; second program, grades 1, 2, and 3, for which the Pintner-Cunningham primary mental test, the Metropolitan achievement test, and the new Stanford achievement test, primary examination, are used; third program, for grades 4 to 8, for which the Kuhlmann-Anderson intelligence tests and the unit scales of attainment are used; fourth program, for grades 4 to 8, for which the National intelligence test and the new Stanford achievement test are used; fifth program, for grades 4 to 8, for which the National intelligence test and the Metropolitan achievement tests are used; and sixth program, likewise for grades 4 to 8, for which the Pintner intelligence test and the Modern School achievement test are used. Each program is "Daltonized" into a series of sixteen tasks, for the carrying out of which detailed instructions and illustrations are given. Instructions are also included for conducting the remedial work indicated by the test results.—*L. A. Averill* (Worcester Teachers College).

4621. Bell, H. *Using the adjustment inventory in counseling.* *Rep. ann. Mtg. Amer. Coll. Person. Ass.*, 1936, 31-34.—The writer discusses the merits and defects of the adjustment inventory as an aid to the counselor in understanding and assisting his students.—*J. Brockwell* (Brown).

4622. Beniuc, M. *Maturitatea copilului pentru clasa intia primara.* (The maturity of the child entering the public school.) *Satul si Scoala*, 1936, 5, 247-250.—A psychological discussion about the best age for entering the public school. The sixth year is supposed to be the best. In this year for the first time the child is able to maintain an objective attitude toward his environment and to understand it, to perform certain given tasks, and to work in a group. The discussion is based mainly on German references.—N. Margineanu (Cluj, Rumania).

4623. Biegeleisen, B. [Examination of technical aptitudes in professional schools. The influence of choice of tests on the diagnostic value of psychotechnical examinations.] *Psychotechnika*, 1934, 8, 196-209.—Entering students at the industrial school at Cracow were given a series of 9 tests: comparison of angles, comparison of lines, graphic memory, the Dounaiewsky series, etc. The correlation of both the whole battery and the individual tests with the entrance examination was about  $.16 \pm .04$ . Two years later another battery of 5 tests was given to the subjects. The results indicate that the second battery of tests has a greater prognostic value than the entrance examination. It was found that the most significant tests for technical students were those of information and mathematics.—(Courtesy *Année psychol.*)

4624. Blanton, A. W. The child of the Texas one-teacher school. *Univ. Texas Bull.*, 1935, No. 3613, Pp. 111.—In this investigation the main purpose was to make an intensive study of the pupil in the Texas one-teacher school. Urban pupils were included in the testing program only as a basis of comparison. The rural pupils were found to be definitely inferior to the urban pupils studied in ability, in school achievement and in socio-economic and physical status.—J. Brockwell (Brown).

4625. Braun, F. *Das pädagogisch-psychologische Institut des NS-Lehrerbundes Sachsen, Leipzig Cl, Gramerstrasse 4''.* (The pedagogico-psychological institute of the NS teachers' organization of Saxony, Leipzig.) *Z. Jugendk.*, 1935, 5, 64-67.—The pedagogico-psychological institute was founded in 1933, when the institute for experimental pedagogy and psychology took over the dissolved Leipzig teachers' association. Its purpose is to serve the psychological needs of all German school children and to further education in the National Socialist German schools.—M. Lee (Chicago).

4626. Broeders, J. *Le dessin dans l'enseignement et dans l'éducation.* (Drawing in teaching and education.) Anvers: "De Sikkels," 1934. Pp. 145. 120 fr.—Plans for teaching nature study to children in the elementary school are given. Three levels of teaching are discussed, leading from free recitation and interests to graphic and more complicated forms.—(Courtesy *Année psychol.*)

4627. Brumbaugh, A. J. Educational adjustment; higher education. *Rev. educ. Res.*, 1936, 6, 222-225.—A review of the literature from October 1, 1932, to October 1, 1935, covering honors courses, individual

instruction, special remedial instruction, sectioning classes on the basis of ability, and articulation of high school and college.—S. P. Hayes, Jr. (Mount Holyoke).

4628. Burk, C. A study of the influence of some factors in style of composition on the interest, comprehension, and rate of reading of fourth-grade pupils. *J. exp. Educ.*, 1936, 4, 303-352.—A study of the influence on 1800 fourth-grade pupils of three kinds of sentences and three forms of story based on three selected stories. Results indicate that fourth-grade pupils are most interested in stories containing short simple sentences and are least interested in stories written in long complex and compound sentences. The type of sentence in which a story is written appeared to have no influence on comprehension. Stories containing long complex and compound sentences produced the highest rate of reading. Stories written in short simple sentences produced the lowest rate score. There were indications that the subjects preferred stories containing direct conversation, and were least interested in those containing indirect conversation. Stories containing direct conversation tended to rank highest in average comprehension score and those containing indirect conversation lowest. Stories written in direct conversation or play form tended to produce the highest rate score. Those containing indirect conversation tended to produce the lowest rate score.—H. W. Karn (Pittsburgh).

4629. Davies, J. B. T. Age allowances in a junior scholarship examination. *Brit. J. educ. Psychol.*, 1936, 6, 180-192.—In the scoring of examinations for award of scholarships justification is found for changing from an age allowance of a given per cent per month of the candidate's marks to a per cent per month of the maximum marks. But it was further found that the allowance needed to be varied according to rank on the order-of-merit list, with smaller age allowances at the higher percentiles. The basic amount and the corrections for level need to be calculated on the current rather than a previous examination.—K. M. Cowdery (Stanford).

4630. Dawson, C. A. Growing up at school. *J. educ. Sociol.*, 1936, 9, 532-537.—A discussion in which the author concludes that "to grow up is to learn to play a role in social situations satisfactory to one's self and acceptable to others. The curriculum may facilitate the growing-process by giving the human phase of the social heritage the place in nurture which it occupied in nature."—W. McTeer (Wayne University).

4631. Earle, F. M., & Kilgour, J. A vocational guidance research in Fife. *Rep. nat. Inst. industr. Psychol.*, 1934, No. 6. Pp. 101.—Studies of three urban and three rural schools (400 pupils) show constant improvement on the tests except for tests of knowledge (in which prediction is of little value for long periods of time). The rural children are superior to the urban group in manual abilities, but inferior in scholastic knowledge and tests of intelligence. Provisional vocational guidance can be made at the ages



of 11 and 12, but true guidance cannot be accomplished until the ages of 14 and 15 or later.—(Courtney *Année psychol.*)

4632. **Educational Press Association of America. Twelfth yearbook.** Washington, D. C.: Committee on Standards, Educ. Press Ass. Amer., 1936. Pp. 31.—This yearbook contains a classified list of educational periodicals, and is a revision of the lists published in earlier yearbooks.—J. Brockwell (Brown).

4633. **Eikenberry, D. H. Educational adjustment; secondary education.** *Rev. educ. Res.*, 1936, 6, 219-222.—A review of the literature from October 1, 1932, to October 1, 1935, covering surveys of adjustment programs, home environment and adjustment, high school promotional plans, and adjustment of behavior problems.—S. P. Hayes, Jr. (Mount Holyoke).

4634. **Gildersleeve, G. Standards and the evaluation and measurement of achievement in music.** *Yearb. nat. Soc. Stud. Educ.*, 1936, 35 (Pt. II), 195-206.—The educational value of school music cannot be adequately judged by group performances. A successful music teacher must be a successful social psychologist, for when music is taught in large groups the emotional conditioning necessary to change attitudes toward music must be maneuvered "through subtlety, indirection, contagion and suggestion." During the past fifteen years there has been a definite and constant emphasis placed on the greater importance of appreciation in music. Objective achievement tests must be developed within each school system. The most common of these is some type of performance which duplicates as nearly as possible the actual learning process. Good music tests should be interesting and attractive, be easy to score, avoid fatigue, duplicate the learning process, and finally be impartial and objective. While each teacher should construct brief tests by means of which the individual can note his development from one regular period to another, he should avoid the misuse of standardized music tests, which often over-emphasize common knowledge, are too mechanical, include information not needed by all pupils, and invite pupils' reactions to symbols divorced from their natural setting. "The ultimate validity of musical-achievement testing, as well as music teaching, is shown by emphasis on the essentials for growth in music and upon music as contributory to sanely balanced, emotionally adjusted living."—P. S. de Q. Cabot (Simmons).

4635. **Good, C. V., Barr, A. S., & Scates, D. E. The methodology of educational research.** New York: Appleton-Century, 1936. Pp. xxi + 882. \$3.75.—The material in this comprehensive handbook for field workers and students of education is arranged in accordance with an analysis of the nature of scientific thinking, to which Chapter I is devoted. Chapters II, III and IV deal with the selection of research problems, emphasizing the necessity for definition and delimitation, with a survey of related information and with the formulation and testing of hypotheses. Chapter V lists classifications of research methods by other authorities and offers a

systematic presentation of procedures, such as historical, normative, experimental, correlation, case study and genetic. Chapters VI, VII, VIII and IX describe and evaluate the first three of these, and Chapter X is concerned with the remaining methods especially adapted to the analysis of complex causal relationships. Chapters XI, XII and XIII consider the analysis, interpretation and evaluation of data, the formulation of generalizations, for the validity of which four tests are suggested, and the preparation of the research report. Chapter XIV deals with standards for evaluating educational research. The two remaining chapters discuss the training and supervision of research workers and briefly summarize the contents of preceding chapters. Of two appendices, the first presents an exhaustive list of problems of needed research in education, classified according to topics and covering 76 pages. The second appendix lists 242 professional publications and organizations, which are concerned with twelve fields of subject matter.—P. S. de Q. Cabot (Simmons).

4636. **Gray, W. The use of tests for diagnosis and remedial work, with special reference to reading and study habits.** *Rep. ann. Mtg Amer. Coll. Person. Ass.*, 1936, 22-27.—The fact is pointed out that a large number of college students are deficient in reading and study habits. Practical procedures are illustrated that may be adopted by any institution for the correction of these habits.—J. Brockwell (Brown).

4637. **Heck, A. O. Special schools and classes.** *Rev. educ. Res.*, 1936, 6, 226-234.—A review of the literature from October 1, 1932, to October 1, 1935, covering general studies, the blind, the crippled, the deaf and hard of hearing, delicate children, speech defects, gifted children, mental defectives, truants and delinquents.—S. P. Hayes, Jr. (Mount Holyoke).

4638. **Hoffmann, A. Die Stellung der Jugendpsychologie an den Hochschulen für Lehrerbildung.** (The place of youth psychology in the advanced schools for teacher training.) *Z. Jugendk.*, 1935, 5, 29-41.—Although these schools are so new that no fixed program has been established, the work in child psychology is so important in them that it should not be omitted from a survey of this field in Germany. As an example of its role in such schools the curriculum at Cottbus for the summer and winter semesters, 1935-6, is given. 46 courses were offered, lectures, laboratory courses and practical work in the school situation. Concentrating the work in the two middle semesters has been found especially advantageous. The extreme importance to teachers of a thorough study of child and adolescent psychology and grasp of its principles is emphasized.—M. Lee (Chicago).

4639. **Hutton, L. On co-education.** *Brit. J. med. Psychol.*, 1936, 16, 62-71.—A psychoanalytic interpretation of co-education based on the report of a 17-year-old male student at a co-educational boarding school.—J. R. Hilgard (Stanford).

4640. **Johnson, H. M. School begins at two.** New York: New Republic, 1936. Pp. xxi + 224. \$1.00.—The book is edited by Barbara Biber, with the assistance of others of Miss Johnson's associates

at the Bureau of Educational Experiments. Part I consists of a short biographical account, a statement of the background of Miss Johnson's contribution to education, and an unpublished manuscript by her on the preschool curriculum. Part II, on philosophy and working hypotheses for a nursery school, has been brought together from published writings by Miss Johnson (indicated in an appendix). Part III consists of two long case studies from the records of the school.—*R. R. Willoughby* (Brown).

4641. **Jonkheere, T.** *A propos de l'origine de la méthode des centres d'intérêt.* (Concerning the origin of the method of centers of interest.) *Rev. Pedagog., Brux.*, 1934, September, pp. 7.—A review of the ideas of Heusinger (1767-1837); Ziller (1817-1882), who formulated the theory of concentration; Parker (1837-1902), who applied the theory and elaborated it on the basis of research on the spontaneous interests of the child; Dewey; Konigbauer, who enumerated 19 "circles of interest," individual and social, toward which the school should orient the child; and Decroly, who places the child at the center and appeals to his needs and interests, assuring his preparation for an individual and social life.—(Courtesy *Année psychol.*)

4642. **Jordan, A. M.** *How to study.* Boston: Christopher, 1936. Pp. 97. \$1.25.—This book is designed to be a practical aid to high school students, containing suggestions in the four chapters based upon current psychological teachings. The last chapter (43 pages) deals with methods of studying the various high school subjects.—*W. E. Walton* (Nebraska).

4643. **Juer-Marbach, F.** *Psychologisch-Pädagogisches über geistige Arbeit, Anstrengung und Überanstrengung.* (Psycho-pedagogical considerations about intellectual work, effort, and overwork.) *Z. padag. Psychol.*, 1934, 35, 151-163.—Individuals vary considerably in their methods of doing mental work. The types rapid and erratic, slow and precise, etc., are reviewed. By analysis of the different ways of working, the author tries to draw conclusions useful for pedagogy and for a better organization of work from the point of view of mental hygiene.—(Courtesy *Année psychol.*)

4644. **Karraker, W. J.** *The effect of student load on scholarship.* *Kentucky Person. Bull.*, 1936 (June), No. 17, 2-3.—The study is concerned primarily with the effect of student load on the scholarship of students at the University of Kentucky, grouped according to five levels of general intelligence. It was concluded that there is no load for students of any level of intelligence which definitely produces better scholarship. The Pearson correlation coefficients between load and standing are all near zero, and not statistically significant.—*J. Brockwell* (Brown).

4645. **Kern, A.** *Genetische Ganzheitspsychologie als wesentliche Grundlage einer anhebenden grundsätzlichen Unterrichtsreform.* (Genetic totality psychology as the essential foundation for a beginning fundamental reform in education.) *Z. Jugendk.*, 1935, 5, 53-61.—Although there is a movement toward totality psychology in nearly all parts of

Europe, the theoretical principles have not yet been applied practically in educational methods. The author outlines the teaching of reading according to the new viewpoint. Since the whole is now recognized as a simpler Gestalt than its logical elements, the first reading experience should consist of a sentence on the board representing a thought which arose from the school situation. Increasing familiarity with this and similar total visual-thought symbols leads to the next Gestalt form, words. Of these the first to be grasped are the ones with emotional value, such as the children's own names, then father, mother, heaven, good, etc., and only much later conjunctions, articles, etc., having little meaning except in context. The next step is the formation of letter Gestalts. Acoustic-motor analysis proceeds even more slowly than optical, but in similar order. Totality psychology has already changed the teaching of arithmetic, but it now remains to develop a method of teaching other subjects, such as singing, drawing, geography, physics, geometry and religion.—*M. Lee* (Chicago).

4646. **Leiner, M.** *Experimentelle Untersuchungen der geistigen Arbeitsleistung von Schülern höherer Lehranstalten.* (Experimental studies on the output of mental work by pupils in secondary schools.) *Abh. Vortr. Bremer wiss. Ges. Bremen*, 1934.—Leiner tested 180 boys between 11 and 18 years for 45 minutes on two successive days by the Kraepelin method of continuous addition. The 14-year-olds showed less output and more variations than either younger or older pupils. This is also the age of the greatest number of "repeaters" in gymnasia. The author concludes that a temporary reduction in capacity for mental work in general begins at 14 years, lasts about two years, and is due to the diminished power of concentration accompanying puberty.—*M. E. Morse* (Baltimore).

4647. **Macomber, F. O.** *A placement study in secondary school economics.* *J. exp. Educ.*, 1936, 4, 353-358.—The purpose of this study was to determine the extent to which high school juniors and seniors of different mental age levels could gain an understanding of certain economic concepts and problems. Students were classified into three groups on the basis of their mental ages. Group I consisted of the upper 25% of the students. All members of this group had IQ's of 115 or better, and MA's of over 18 years 4 months. Group II consisted of the middle 50% and Group III of the lower 25% of the students. The IQ range of the lower group was from 76 to 98, and that of Group II from 99 to 114 inclusive. Group I students had mental ages of 15 years 9 months or less. The teaching procedures used, while probably superior to those of the average high school class, were still largely representative of the subject-matter approach. "Taken as a whole the concepts involved in this study are entirely too difficult for the high school students of Group III and for large numbers of Group II. This study is broad enough in its scope to cast considerable doubt on the advisability of attempting to teach economics to any but students of better than average ability with-

out greatly modifying the content, procedures, and time allotments of the course."—*H. W. Karn* (Pittsburgh).

4648. Newland, T. E. **Testing for counseling.** *Rep. ann. Mtg Amer. Coll. Person. Ass.*, 1936, 19-22.—The article points out that testing of the various capacities and abilities of college students must be undertaken with a definite purpose, and that counseling and guidance must be in terms of the particular educational and social philosophy upheld by the college or university.—*J. Brockwell* (Brown).

4649. Newland, T. E., & Moore, R. S. **An analysis of the New York state regents examinations in chemistry from 1927 to 1934.** *J. exp. Educ.*, 1936, 4, 359-363.—An analysis of 15 regents examinations over an eight-year period showed the following conditions: (1) There was a marked variation in the number of topics tested from examination to examination. Out of 35 significant topics, the range was from 13 to 30. (2) The amount of credit emphasis upon any given topic varied greatly from year to year, even though the topic may have been provided for in each of the 15 examinations. (3) While there was a significant increase over the eight-year period in the percentage of objective questions used, those constructing the tests have not given way completely to the objective questions. From 40 to 50% of the credit on the examination may be earned or lost through questions judged to be subjective.—*H. W. Karn* (Pittsburgh).

4650. Palmer, E. Z. **Effect of student jobs on university standing.** *Kentucky Person. Bull.*, 1936 (June), No. 17, 1-2.—The general conclusion of this study, made at the University of Kentucky in the spring of 1935, is that men and women who take jobs while in college reduce their school credit hours a little, but not to a great extent. This seems to indicate that attendance at the university is not a full-time responsibility.—*J. Brockwell* (Brown).

4651. Parr, F. W. **The problem of student honesty.** *J. higher Educ.*, 1936, 7, 318-326.—By subjecting 409 college students over a period of two years to a "vocabulary test" in which an opportunity to cheat was offered the author investigated the extent of cheating in a "typical college classroom" and factors related to such behavior. The author began with certain assumptions concerning the undesirability, inevitability and seriousness of cheating. 42% took advantage of the opportunity to be dishonest. A sex difference was revealed, 45% of the men being found dishonest as compared with 38% of the women. The influence of age was indicated by an increase in cheating from the 17 year level to the 21 year level. Sophomores were found to be more honest than freshmen. Children of professional parents were more honest than those coming from the laboring groups. Other factors showing a positive relationship to dishonesty were rank in graduating class, degree of self-support, scholarship, and mental ability. The author draws the conclusion that "any factor or condition which brings pressure to bear upon the student will tend to produce dishonest behavior" and stresses

particularly the influence of competition with other students, differences in mental ability, and participation in extra-curricular activities in causing dishonesty. The author advocates a character training program based on "a better understanding of the factors underlying various forms of behavior," and suggests that teachers take greater care in fitting the educational program to the needs, interests and abilities of the student.—*R. A. Brotemarkle* (Pennsylvania).

4652. Patzelt, E. **Zum Problem der Vorpupertät.** (The problem of pre-puberty.) *Mittelwalde i. Schles.*: Tauch & Latzel, 1935. Pp. 63.—*R. R. Willoughby* (Brown).

4653. Pauli, R. **Über das Lesenlernen im vorschulpflichtigen Alter.** (Learning to read in the pre-school age.) *Z. pädag. Psychol.*, 1935, 36, 192-202.—The subject of this experiment was the author's daughter, a physically normal child with an IQ of 120. The present case is distinguished from related reports and experiments by the unusually early age (2 yrs. 10 mos. at the beginning) and the exclusively play method which it necessitated. During the first half of the fourth year she learned to recognize the vowels and *s* and words formed from them, also her name; and to write *o*, *u*, and *i*. The experiment was then discontinued, but tests at intervals of several months showed a rapid loss of word recognition. The letters were retained and with them the idea of relationship between speech and written signs. Pauli considers that a valuable nucleus for reading and writing can be created in the preschool period. This is recommended in individual cases, and especially it offers possibilities for the kindergarten and would relieve the first grade. The art of this teaching consists not in the use of any one method but in an organic unity of various methods adapted to the individual case.—*M. E. Morse* (Baltimore).

4654. Peters, C. C. **Abstracts of studies in education.** *Penn. St. Stud. Educ.*, 1936, 14. Pp. 68. \$0.25.—This is an abstract of studies in education made at the Pennsylvania State College. Some of the more important topics are as follows: an empirical test of the tetrachoric coefficient of correlation computed from mutilated distributions with widespread dichotomies, C. E. Amos; further validation of the Bernreuter Personality Inventory, B. S. Bloom; a comparison of the efficiency of an individual method and a group method on the teaching of ninth-grade algebra, H. P. Breininger; effectiveness of teaching techniques in influencing pupils' attitudes toward peace and war, D. W. Campbell; the occupational careers of graduates of the Philipsburg (Pa.) senior high school, with suggestions for curriculum modification, F. E. Ehrenfeld; the changes in civic attitudes and civic information as a criterion for teaching procedure, C. A. Frits; an objective evaluation of the graphic versus the numerical presentation of cumulative personnel data, A. E. Hangen; an evaluation and comparison of two formulae for correcting coefficients of correlation for heterogeneity, R. S. Hovis; historical fictions as an aid in the development of superior



attitude and achievement in American history, R. S. Jamison; an approach to curriculum revision based upon a diagnosis of a group of rural school pupils in relation to their knowledge of general information, G. C. Miller; extensive reading versus intensive textbook study as a means of acquiring a knowledge of scientific facts, R. S. Rice; a comparison of the changes in pupils' character and information resulting from instruction in general science by the activity method versus the traditional recitation method, H. C. Singleton; a scoring key for measuring the interests of army officers, L. H. Tabscott.—*J. Brockwell* (Brown).

4655. Pinto, E. Como classificar os alunos? (How should pupils be classified?) *Bol. Educ. Pernambuco*, 1933, 47-50.—Classification on the basis of mental age is inconvenient and puts together pupils of different chronological ages and various degrees of retardation, etc. Classification by intelligence quotients is preferable, using three categories, the bright, the normal, and the retarded. The educational quotient gives a more exact classification and information regarding realized scholastic capacities; the IQ gives information on natural aptitudes.—(Courtesy *Année psychol.*)

4656. Rice, R. S. Extensive reading versus intensive textbook study as a means of acquiring a knowledge of scientific facts and principles. *J. exp. Educ.*, 1936, 4, 376-402.—The experimental (extensive) and control groups of science pupils used in the study were equated in IQ, previous attainment in science, grade in school, and sex. Analysis of test results obtained from the two groups leads to the following conclusions: (1) Extensive-reading pupils remember more scientific facts and principles than do intensive-study pupils. (2) Extensive-reading pupils learn a number of additional scientific facts which are not learned by the intensive-study pupils. (3) Many pupils prefer extensive reading to intensive textbook study. (4) To a slight degree boys seem to exceed girls in a knowledge of scientific facts and principles.—*H. W. Karn* (Pittsburgh).

4657. Rosecrance, F. C. The training of personnel and guidance workers. *Educ. Trends*, 1936, 4, 19-24.—The data presented in this report were gathered as a part of a comprehensive study of the organization and administration of personnel and guidance services in 70 cities of 100,000 population. The findings reported were obtained by questionnaire. Two types of information were sought: (a) statements of fact regarding the duties, training and experience of pupil-personnel workers, and (b) judgments as to these items and the guidance program in general. The findings are presented under the following heads: (1) academic degrees, (2) years in which degrees were awarded, (3) subjects taken by guidance functionaries, (4) subjects found to be most helpful, (5) courses needed, (6) suggested courses for future personnel workers.—*H. W. Karn* (Pittsburgh).

4658. Ross, V. R. Relationships between intelligence, scholastic achievement, and musical talent. *J. juv. Res.*, 1936, 20, 47-64.—1541 pupils in grades

5-12 were given the Terman group test of mental ability, the Stanford achievement test, Form V, and the Seashore test of musical ability. The relationship, in the groups studied, between intelligence and musical talent was found to be positive but small; tests for pitch, tonal rhythm, and consonance correlated highest with IQ (.25, .26, .21). The same tests of musical ability yielded low positive but probably significant correlations with tests of achievement in arithmetic and reading. Pupils who elected music courses during the last two years of their secondary school work were, on the average, slightly superior to the population to which they belonged in IQ, as well as in their ability to discriminate consonance and remember tonal patterns. Pupils who possessed exceptional musical ability were found to be, as a group, far above average in intelligence and school achievement.—*H. L. Koch* (Chicago).

4659. Scaramelli, J. Organização científica das escolas normais. (Scientific organization of normal schools.) Guaratingueta: 1934. Pp. 39.—Considerations of the role of education (preparation for participation in social life and contributing to its progress) and that of pedagogy by the director of the Brazilian Normal School at Guaratingueta. The plans of instruction and schedules of the normal school are given.—(Courtesy *Année psychol.*)

4660. Schonell, F. J. Ability and disability in spelling amongst educated adults. *Brit. J. educ. Psychol.*, 1936, 6, 123-146.—A spelling test of 60 words given to 151 adults engaged in various occupations and to 447 training-college students of both sexes showed the same average accuracy for the adults as for the first-year students, and slightly higher for second-year students; there were no significant differences between men and women. Correlations with age and intelligence were .35 and .19 respectively. Cases with serious disability were studied for causes, which were found to be (1) temperamental, based on general emotional instability, adult attitudes toward spelling, general disregard for details, an inferiority attitude toward spelling disability, and apathy with regard to disability; (2) intellectual, consisting of weak visual perception, weak auditory perception, and a combination of the two; (3) sensory, largely visual and motor; and (4) environmental, such as irregularity in school attendance and failure of the schools to discover and correct weaknesses.—*K. M. Cowdery* (Stanford).

4661. Schröder, H. Das psychologisch-soziologische Gesicht der Berufsschule. (The psychological and sociological aspects of the vocational school.) *Z. pädag. Psychol.*, 1935, 36, 305-325.—Schröder discusses the rivalries among pupils in different occupational groups; the "tone" of various classes; solidarity; ethical standards; the pupils' attempts to identify themselves with workers in their future vocations; the teacher's opportunities for leadership; and the sociological function of the vocational school as a social collective, particularly in relation to Nazi youth organizations. Occupational rivalries are motivated by the pupil's pride in his vocation, which

is a means of raising his self-valuation. The "class" of an occupation is determined by the "external cleanliness" of the work. In the pupils' estimation, theoretical studies count for nothing in comparison with practical training.—*M. E. Morse* (Baltimore).

4662. Shakespeare, J. J. **An enquiry into the relative popularity of school subjects in elementary schools.** *Brit. J. educ. Psychol.*, 1936, 6, 147-164.—From 9127 children, approximately equal numbers of boys and girls, ages 10 to 14, in elementary schools of Worcestershire, lists of school subjects arranged in order of popularity were obtained with reasons expressed for the first two and last two on each list. Average ranks by ages and by sexes were calculated for each subject and compared with a similar listing by Cyril Burt from children in London. Comparisons between fast and slow groups were made. Analysis of reasons for popularity indicates that, in general, opportunity for bodily activity on the part of pupils makes a subject attractive. At about age 11 recognizable achievement of results has an effect; a year or so later the utility of the subject begins to be noted and provides motivation.—*K. M. Cowdery* (Stanford).

4663. Strang, R. **Educational adjustment; elementary education.** *Rev. educ. Res.*, 1936, 6, 218-219.—A review of the literature from October 1, 1932, to October 1, 1935, covering gifted children, individual instruction, special remedial instruction, ability grouping, and certain factors contributing to educational adjustment.—*S. P. Hayes, Jr.* (Mount Holyoke).

4664. Thomson, G. H. **The value of intelligence tests in an examination for selecting pupils for secondary education.** *Brit. J. educ. Psychol.*, 1936, 6, 174-179.—In the West Riding of Yorkshire a group intelligence test, an examination in English, and one in arithmetic have been given to select pupils for awards of scholarship at entrance to secondary schools. For a group of 613, ages 10 years 11 months to 11 years 11 months, correlations with headmasters' and headmistresses' rankings of pupils after two years' work gave results as follows: rank with IQ, .410; rank with arithmetic, .379; rank with English, .346; rank with arithmetic plus English (equal weight), .445; rank with arithmetic plus English plus IQ (equal weight), .491; rank with best weighted combination of three, .492. The multiple correlation corrected for restriction of range of talent is estimated as approximately .8.—*K. M. Cowdery* (Stanford).

4665. Thyen, H. **Über Geschlechtsunterschiede in den Schulfähigkeiten.** (Sex differences in scholastic abilities.) *Z. pädag. Psychol.*, 1935, 36, 325-335.—This amplification of Thyen's previous researches (1929) is based on statistical analysis of the marks of students in all subjects during their first three years in a coeducational high school. The boys excelled in practical subjects and factual knowledge; the girls in languages, history, mathematics, and natural science. These findings may be influenced by the fact that the girls had passed puberty, while the boys were in the prepubertal or pubertal period.—*M. E. Morse* (Baltimore).

4666. Turney, A. H. **The psychological basis of grouping.** *Yearb. nat. Soc. Stud. Educ.*, 1936, 35, (Pt. I), 81-115.—Ability grouping favors individualization within groups. The aim of ability grouping emphasizes both prediction with a search for predictive indices and the attainment of the fullest individual development. Considerable confusion exists at present concerning the bases adopted for grouping, which may be conveniently classified under the categories of physical development, intelligence, achievement, motivation, social factors, special abilities and special disabilities. "Grouping on the basis of a measurement of the general ability 'g' must offer the best opportunity for truly developmental presentation." All discrepancies between ability and achievement should be brought into bold relief by the adoption of a classificatory scheme, which is offered by a modification of grouping by the use of mental tests. "The outstanding error made in the interpretation of ability grouping is the failure to realize that, if the curriculum permitted full use of mental ability and motivation were maximal, low sections would seldom, if ever, appreciably overlap higher sections."—*P. S. de Q. Cabot* (Simmons).

4667. Wagner, J. **Experimentelle psychologische Untersuchungen über den didaktischen Anschauungswert graphischer Darstellungen im Unterricht.** (Studies of experimental psychology on the representative value of graphic representations in teaching.) *Z. pädag. Psychol.*, 1934, 35, 217-224; 318-324; 352-365.—The study aimed to find the geometric form which is best adapted for use in the construction of diagrams to represent statistical findings. Comparing series of rectangles, squares, cubes, and circumferences, it was found that relative sizes of a series are best appreciated by using rectangles, then circumferences and squares, cubes being the least effective. Rectangles not only give the most exact idea of relative sizes, but the facts are appreciated more rapidly and more easily than with the other forms. Percentages are best shown by marking off portions of a circle. Reciprocal values are best shown by straight lines. Rectangles having the same base but differing in altitude are best for showing classifications of increasing series.—(Courtesy *Année psychol.*)

4668. Waller, W. **Personality changes in practice teachers.** *J. educ. Sociol.*, 1936, 9, 556-564.—A brief report of the general trend of findings obtained from talks with practice teachers, study of diaries and life-history documents, and from interviews based on a selected question schedule of more than 22 items. 43 complete schedules and 7 life-history documents were used as the basis of this report. "The conclusion seems indicated that the practice period of nine weeks is long enough for the development of habits and skills, but not long enough to permit the student to obtain a good understanding of the teaching situation nor to see him through the period of sharpest conflict with his occupational role."—*W. McTeer* (Wayne University).

4669. Warner, W. L. **Formal education and the social structure.** *J. educ. Sociol.*, 1936, 9, 524-531.—

This article is a discussion of education in relation to social stratification, based upon an extensive study of two large communities, one in Massachusetts and one in Mississippi. It is pointed out that the northern community has six social strata or classes, while the southern community has two castes (white and negro) further subdivided into classes within each caste. The educational system of the northern community with the aid of private schools, and that of the southern community with separate schools for white and negro, both tend to condition the children to the existing adult mores. "If a society is to maintain a sufficient equilibrium to allow its members to live with a minimum of conflict, its schools must express the norms of the structures that make up its social parts. Such are the schools of the smaller towns of the rural areas of the deep South and of New England."—*W. McTeer* (Wayne University).

4670. Wattenberg, W. W. Teachers as citizens. *J. exp. Educ.*, 1936, 4, 368-375.—The author presents some of the results obtained in an exploratory study. Information was obtained by means of interviews and questionnaires. Two case histories are given to show the complexity of the problem. A "type analysis" of the data revealed two patterns worth mentioning: (1) the unmarried woman teacher over 30 whose interest is in aiding individuals; and (2) the young person holding mildly socialistic ideals which have apparently been a development of religious interest. A sample of the type of result to be expected from statistical manipulation of the data is given. In general, the investigation revealed that the study of teachers' citizenship activities presents so many complexities that the problem is beyond the scope of individually conducted research: what is needed is a broad, well-planned project involving the cooperation of many research workers.—*H. W. Karn* (Pittsburgh).

4671. Wenzl, A. Charakterbildung durch den Willen zur Wahrheit. (Character building through the will-to-truth.) *Pädag. Warte*, 1935, No. 13, 1-5.—On the childhood level the will-to-truth is the creation of an attitude and exercise of the will through habit formation; in the adolescent and adult it is discipline of the will in the service of truth itself, i.e. education in thinking. Thought presupposes character, and the discipline of thought is necessary for character formation. Wenzl illustrates how the will-to-truth may be systematically developed through school work and sports.—*M. E. Morse* (Baltimore).

4672. Witty, P. A., & LaBrant, L. L. Aims and methods in reading instruction. *Educ. Trends*, 1936, 4, 5-9.—It is the authors' contention that the typical elementary school usually reflects outmoded aims and methods which have little to do with maximum personal adjustment, growth and development. For example, reading is often considered as a concatenation of habits, formed mechanically as a result of drill. Worthwhile reading is not itself an isolated, mechanical process, and its elements are not independent units of pronunciation, recognition of individual words, eye movements, etc. It is meaning-

ful enterprise which is a part of a larger attempt to understand and interpret life. Teaching, whether as an initial procedure or as a remedial measure, must keep reading on a meaningful basis, and reading matter must be presented in a way such that every child may sense and experience success. The reading itself must serve needs and interests, and the recognition of words and larger units must be functional. Successful reading is a thought process which is important chiefly as it makes its natural contribution to the larger growth pattern.—*H. W. Karn* (Pittsburgh).

4673. Wood, B. Contributions of the cooperative test service to the use of tests in the counseling and guidance of students. *Rep. ann. Mtg. Amer. Coll. Person. Ass.*, 1936, 27-30.—A short history of the cooperative test service is given; this is followed by an outline of its contributions to the use of tests in guidance work.—*J. Brockwell* (Brown).

[See also abstracts 4368, 4385, 4416, 4516, 4527, 4544, 4552, 4565, 4588, 4593, 4681, 4706, 4707, 4715, 4727, 4744, 4745, 4748, 4749.]

#### BIOMETRY AND STATISTICS

4674. Dunlap, J. W. Note on computation of biserial correlations in item evaluation. *Psychometrika*, 1936, 1, 51-58.—By the use of an algebraic variant of the ordinary formula for biserial correlation, tables, and graphic devices, a time-saving systematic procedure for the computation of biserial correlation coefficients is outlined for application to the evaluation of items of a test. A table of  $p/z$  for arguments of  $p = .000$  to  $p = .999$  is given.—(Courtesy *Psychometrika*).

4675. Horst, P. Obtaining a composite measure from a number of different measures of the same attribute. *Psychometrika*, 1936, 1, 53-60.—When several different measures of the same attribute are available, certain assumptions lead to the statement that the separate measures should be combined in such a manner that the composite measure will result in making the sum of the squares of the differences between all possible pairs of members in the group a maximum. By algebraic manipulation, partial differentiation, and the use of determinants, a method is derived which gives the theoretical solution of the problem. Because this method involves a great deal of numerical labor if the number of variables exceeds three or four, an approximate method is also derived. The use of the approximate method is illustrated by a numerical example.—*A. K. Kurtz* (Psychometric Society).

4676. Hotelling, H. Simplified calculation of principal components. *Psychometrika*, 1936, 1, 27-35.—A modification of the iterative scheme of calculating principal components is presented. By squaring the matrix of the covariances, each iteration is equivalent to two iterations with the original correlations and the number required for any given degree of accuracy is cut in half. By squaring  $s$  times successively, one step of the iterative process is equivalent to  $2^s$  steps with the original matrix. A numerical example gives



the intercorrelations of four tests and shows the application of the method to the determination of the first three principal components.—A. K. Kurts (Psychometric Society).

4677. Kowalski, W. W jakiej mierze korelacja jest stosunkiem przechodnim? (To what degree is correlation a transitive relation?) *Kwart. psychol.*, 1936, 8, 111-116.—If three variables  $a$ ,  $b$ ,  $s$  are given and the correlations between  $a$  and  $s$  and  $b$  and  $s$  are known, the problem arises as to what interval contains the correlation between  $a$  and  $b$ . The author demonstrates a formula by which the limits of this least interval can be calculated.—T. M. Abel (Progressive Education Association).

4678. Marbe, K. Grundfragen der angewandten Wahrscheinlichkeitsrechnung und theoretischen Statistik. (Fundamental questions concerning the applied calculus of probabilities and of statistical theory.) Munich: Beck, 1934. Pp. 177.—A discussion of prediction in games of chance and in the number of births of boys and girls on the basis of given records. The mathematical theory of probability can no longer be applied, with the theoretical interpretations which are involved, to real events.—(Courtesy *Année psychol.*)

4679. McCarthy, D. A graphic age conversion scale. *Child Developm.*, 1936, 7, 74-75.—To aid in interpreting the results from different laboratories, the author presents a scale for converting ages from days to weeks or months. The scale covers five years. "In the construction of the graph each 365-day year was divided into twelve equal months of 30.42 days, and into 52.14 weeks of seven days. Although the finest units marked on the scale are five-day units, the scale can be read quite easily to about the nearest day."—W. McTeer (Wayne University).

4680. Rashevsky, N. Further contributions to the mathematical theory of human relations. *Psychometrika*, 1936, 1, 21-31.—In continuation of a previous paper, some consequences of the fundamental equations established there are studied. For some simple hypothetical cases it is shown how some of the parameters which enter into the equations governing the structure of the social group can be determined by means of those equations from actually observable data. Furthermore some general properties of the variation with respect to time of the fundamental distribution function, which enters into the equations, are derived.—(Courtesy *Psychometrika*).

4681. Richardson, M. W. The relation between the difficulty and the differential validity of a test. *Psychometrika*, 1936, 1, 33-49.—Using scores of 1200 students on a long test as a criterion, each of five subtests of different difficulty has maximum correlation with the criterion when the criterion is dichotomized at a value appropriate to the difficulty of the subtest. A 50-item test element is scored on an all-or-none basis with different standards for passing, and the percentage of passes for successive points on the criterion variable is computed. The constant method is applied to this relationship. The limen thus computed is a measure of difficulty, the dispersion is

a measure of average (or total) validity, and the slope of the curve is a measure of differential validity. The difficulty of a test element is thus directly related to the maximum differential validity.—(Courtesy *Psychometrika*).

4682. Roff, M. Some properties of the communality in multiple factor theory. *Psychometrika*, 1936, 1, 1-6.—Several theorems concerning properties of the communality of a test in the Thurstone multiple factor theory are established. The following theorems are applicable to a battery of  $n$  tests which are describable in terms of  $r$  common factors, with orthogonal reference vectors. (1) The communality of a test  $j$  is equal to the square of the multiple correlation of test  $j$  with the  $r$  reference vectors. (2) The communality of a test  $j$  is equal to the square of the multiple correlation of test  $j$  with the  $r$  reference vectors and the  $n-1$  remaining tests. Corollary: The square of the multiple correlation of a test  $j$  with the  $n-1$  remaining tests is equal to or less than the communality of test  $j$ . It cannot exceed the communality. (3) The square of the multiple correlation of a test  $j$  with the  $n-1$  remaining tests equals the communality of test  $j$  if the group of tests contains  $r$  statistically independent tests each with a communality of unity. (4) With correlation coefficients corrected for attenuation, when the number of tests increases indefinitely while the rank of the correlational matrix remains unchanged, the communality of a test  $j$  equals the square of the multiple correlation of test  $j$  with the  $n-1$  remaining tests. (5) With raw correlation coefficients, it is shown in a special case that the square of the multiple correlation of a test  $j$  with the  $n-1$  remaining tests approaches the communality of test  $j$  as a limit when the number of tests increases indefinitely while the rank of correlational matrix remains the same. This has not yet been proved for the general case.—(Courtesy *Psychometrika*).

4683. Sorenson, H. Statistics for students of psychology and education. New York: McGraw-Hill, 1936. Pp. viii + 373. \$3.50.—After introductory material covering the definition and scope of statistics, the present-day need for statistical training, and graphic methods, six chapters are devoted to measures of central tendency, dispersion, skewness, and kurtosis. The meaning of correlation is discussed at length and the calculation of correlation coefficients by the Pearson product-moment method is illustrated both when deviations are measured from the true means and when arbitrary origins are used. Other measures of correlation are also included, a part of one chapter being devoted to partial correlation and multiple correlation. A chapter is devoted to unreliability of the simpler frequency constants, and another to the reliability of the differences between means. The last (19th) chapter is on correction for attenuation and the coefficient of reliability. The bibliography lists 21 textbooks. The appendix contains a table of squares and square roots and five tables showing the ordinate and various functions of the area of the normal curve.—A. K. Kurts (Psychometric Society).

4684. Stouffer, S. A. Reliability coefficients in a correlation matrix. *Psychometrika*, 1936, 1, 17-20.—Given  $s$  fallible tests  $t_1, t_2, \dots, t_s$ , the problem is to express their intercorrelations in terms of the average correlations between a varying number of parallel forms contained within each test. A new correlation determinant  $\Delta'$  is derived containing  $d_{ii}$  instead of unity as an element on the principal diagonal, where

$$d_{ii} = [1 + (m_i - 1)r_{ii}]/m_i,$$

in which  $m_i$  is the number of parallel forms comprising the  $i$ th test and  $r_{ii}$  is the average intercorrelation of the  $m_i(m_i - 1)/2$  parallel forms. As  $m_i \rightarrow \infty$ ,  $d_{ii}$  approaches the correlation "corrected for attenuation." These results make explicit the assumptions as to intrinsic accuracy of all measures which are implicit in the usual multiple and partial correlation analysis. These results also make possible a simple procedure for estimating the effect on various partial correlation measures of improving the accuracy of part or all of the measures by including additional parallel forms.—(Courtesy *Psychometrika*).

4685. Wenger, M. A., & Irwin, O. C. A note on  $z$ -scores as a technique for treating serial measurements of electrical skin resistance. *Child Developm.*, 1936, 7, 69-70.—In the light of the findings presented, the authors conclude that "it is clear that serial measurements of skin resistance cannot be directly compared unless they fluctuate about the same mean. It is also clear that  $z$ -scores furnish an adequate technique for comparing serial measurements fluctuating about different means."—W. McTeer (Wayne University).

[See also abstracts 4335, 4535, 4680, 4697.]

#### MENTAL TESTS

4686. Archer, R. L. A note on the theory of the general and specific factors in ability. *Brit. J. educ. Psychol.*, 1936, 6, 165-173.—In connection with beginners' study of Spearman's two-factor theory confusion arises when the  $g$  factor is described as non-trainable and  $s$  factors as trainable. It is urged that "train" be applied only to a complete human being or animal, rather than to any particular abstracted power; that not "training a potentiality" but "developing of skill systems or habits by means of potentialities" be described. It is further urged that  $s$ , like  $g$ , be defined as measures of innate possibilities rather than as skills, for by derivation they are like  $g$  except for generality, being the potentialities for fewer skills or systems of habits.—K. M. Cowdery (Stanford).

4687. Barreto, A. P., & Campos, A. Revisão pernambucana da escala Binet-Simon-Terman. (The Pernambuco revision of the Binet-Simon-Terman scale.) *Arch. Assist. Psicopat. Pernambuco*, 1934, 4, 1-18.—Revisions of the scale for years III and IV have been given previously. In this article the years V to VIII are revised with the aid of the Kuhlmann revision. It is suggested that some of the items on the Terman scale should be changed.—(Courtesy *Année psychol.*)

4688. Bugnion, B. Le test de barrage. (The cancellation test.) *Arch. Psychol., Genève*, 1935, 25, 77-97.—569 boys from 11 to 19 years of age were given the Toulouse-Piéron cancellation test, the symbols used, however, being enlarged. Four kinds of symbols had to be cancelled during a four-minute period. Statistics are based on the number of correct cancellations, omissions, and errors. The number of correct symbols represented the quantity of work done, while quality was represented by the relation between the number of correct symbols minus the errors and the total number of symbols to be cancelled. Examination of the frequency curves, the norm tables, and the development curves showed that quantity followed a regular course of development with considerable scattering for all ages, while quality reached its height at 15 years, with a minimum of scatter also at that age. However, all ages showed a marked tendency for quality to reach the upper percentiles in the majority of subjects. The correlation between quantity and quality approached zero. Consistency of the tests was verified on about 40 subjects and was found to be .80 for quantity and .40 for quality. These heterogeneous results are discussed and compared with those from other attention tests.—M. R. Lambercier (Geneva).

4689. Coutinho, C. Padronização do "Northumberland mental test." (Standardization of the Northumberland mental test.) *Arch. Assist. Psicopat. Pernambuco*, 1933, 3, 101-110.—The test was given to 1829 subjects (491 were males), 102 of whom were adults; the age range of the rest was from 9 to 17 years. The test is best suited to the ages 13 to 15 (median score 23 to 35) and is too difficult for those below and too easy for those above this range. The norms of Ballard and those for Recife are given.—(Courtesy *Année psychol.*)

4690. Filozof, J. [Test of memory for forms. Material for a monograph of the test and a contribution to the study of the methodology of psycho-technical notation.] *Psychotechnika*, 1933, 8, 122-134.—The test, modified by Lahy, is one in which the subject must recognize from among many geometric forms a few which had been shown to him before. The author applied different notation formulae to raw scores obtained on 215 boys, aged 13-17. The expression  $D - (B + O)$  is preferred ( $D$  equals the number of correct responses,  $B$  the number wrong, and  $O$  the omissions). This formula gives a regular distribution of the cases. The other formulae which were tried are discussed.—(Courtesy *Année psychol.*)

4691. Fränkel, F., & Benjamin, D. Die Kritik der Versuchsperson beim Rorschach'schen Formdeutversuch. (The subject's criticism in the interpretation of the Rorschach forms.) *Schweiz. Arch. Neurol. Psychiat.*, 1934, 33, 9-14.—Two types of criticism are given by subjects when taking the Rorschach test: subjective, relative to mere perception (color-blind subjects can thus reveal themselves); and criticism of the object, forms, colors, etc. The critical observations can throw further light on the results with respect to the characteristics and psychoneurotic troubles of the subjects.—(Courtesy *Année psychol.*)

4692. Grzywak-Kaezyska, M. [Intelligence tests for children and adolescents of 10 to 16 years.] *Polsk. Arch. Psychol.*, 1933-34, 5, 225-240.—Using two non-verbal and five verbal tests which were given to 1534 children (boys and girls, aged 10-16), centiles were computed for each age and sex group for each test. Norms are given for centiles 40-60. The greatest variability occurs in years 12, 13, and 14. The mental age is greater than the chronological age for years 10 and 11; at ages 12 and 13 they coincide; and at the ages 14, 15, and 16 the mental age is below the chronological. This can be explained by the fact that children of 10-11 do not show the lower limits of their abilities, while for years 14-16 the ceiling is too low to allow the tests to show their highest limits.—(Courtesy *Année psychol.*)

4693. Huth, A. *Ordnen von Werkzeugzeichnungen als psychologische Eignungsuntersuchung im Dienste der Berufsberatung.* (The arrangement of industrial designs as an aptitude test for use in vocational guidance.) *Z. pädag. Psychol.*, 1934, 35, 154-171.—The author gives a detailed description of the test used and of his method of application and of evaluation. The problem in the test is to find two or three identical figures among very similar designs.—(Courtesy *Année psychol.*)

4694. Huth, A. *Ein Testheftverfahren mit qualitativer Bewertung.* (A method of testing with qualitative evaluation.) *Z. pädag. Psychol.*, 1934, 35, 225-228.—The author has made the following modifications on the Bobertag-Hylla test: (1) the number of paragraphs dealing with the different personality traits has been increased; (2) the order of the paragraphs has been rearranged so that even the slowest subject can answer those which deal with the greatest number of traits. The total number of paragraphs is 100, and the whole test requires one hour. Results were obtained on 444 boys and 394 girls. The test is used in the vocational guidance bureau when there is a small number of candidates, when it is necessary to get as much information as possible in a short time about the subject, or when it is a matter of examining visually or auditorily deficient subjects.—(Courtesy *Année psychol.*)

4695. McManama, M. A genetic study of the cognitive general factor in human intelligence. *Stud. Psychol. Psychiat. Cathol. Univ. Amer.*, 1936, 4, No. 2. Pp. 35.—A close measure of the general cognitive factor was obtained with a battery of five tests so constructed as to retain their validity throughout the primary and secondary school ages. These were completion, definition, discrimination, analogy, and proverb tests. Spearman's method was employed; the growth curve for intelligence fitted the formula  $\log y = a + bc^x$ . The means of the tests increased regularly with age, and normal distributions were found for all but the extreme age groups from 9 to 19. Sample items from the five tests are given in the appendix.—H. D. Spoerl (American International College).

4696. Meili, R. *Faut-il mesurer la qualité ou la quantité?* (Is it necessary to measure quality or

quantity?) *Arch. Psychol., Genève*, 1935, 25, 98-109.—The author notes certain ideas suggested by his reading of the Bugnion article on cancellation of symbols (see X: 4688). The aim of these notes is to clear up certain misunderstandings arising from want of precision in the use of the terms quality and quantity. These terms really represent not psychological realities but aspects of the objective task, of the product. The latter is the resultant of a certain capacity of the worker and of a certain attitude toward the task, these two factors varying from one task to another. In aptitude tests one should have tasks which can initiate the same attitude in all subjects, while in tests designed to measure attitudes or tendencies the individual capacities of the subjects should play only a very minor role.—M. R. Lambertier (Geneva).

4697. Wojciechowski, J. [The scoring of composite tests.] *Psychotechnika*, 1934, 8, 210-220.—Garrett's method was applied to results on the Dounaiewski test. The results were also treated by a more simple process, consisting of giving the separate questions values which were inversely proportional to the number of correct solutions obtained. It is concluded that Garrett's procedure is justified only when the separate problems can be considered as independent units. When the solution of one question in a series facilitates the solution of the following questions, the system of inversely proportional coefficients should be used. This procedure is also recommended when a rapid classification of subjects is desired.—(Courtesy *Année psychol.*)

[See also abstracts 4390, 4479, 4480, 4508, 4523, 4532, 4658, 4664, 4681, 4758.]

#### CHILDHOOD AND ADOLESCENCE

4698. Anderson, J. E. [Ed.] *The young child in the home.* New York: Appleton-Century, 1936. Pp. xxi + 415. \$3.00.—Information on the physical, social, and emotional life of 4000 children aged 0 to 12, white and negro, is presented in two ways: first to show differences in care and training at various social levels, and second with reference to age and developmental relations. The conclusion is that the environment of the child is differential with respect to virtually every item of equipment or care. Homes were classified by the use of the Minnesota scale for occupational classification. The findings, obtained in home interviews, present graphically and analytically facts concerning growth, sleep, diet, cleanliness, habit training, health protection, emotional, intellectual and social life. In general, the quality of care received by children becomes worse with descending socio-economic scale. The most effective means of raising the level of care is through a program of pre-parental and parental education. It should be recognized that a study program for parents must be adapted to the educational level of those it is designed to reach. Standards of care were found to be somewhat better than anticipated; with more provision on physical than on mental and social levels. Complete mechanics of the survey are given in an appendix.—M. P. Montgomery (Faribault, Minn.)



4699. Belskii, P. G. O vliyanii semeino-bytovykh uslovii i mikroraiiona na razvitiie kharaktera i povedeniia trudnovospituemykh detei i podrostkov. (The influence of social environment on the formation of problem children's personality.) *Trud. Inst. Isuch. Mozga Bekht.*, 1936, 5, 24-68.—The relation of social environment to the formation of character traits was studied in 150 pupils of a school for problem children. A combination of good and bad conditions was found in each family, but often a single defect determined the child's behavior. Environment does not form the child's conduct and character automatically, but the relationships between environment and reaction are mutual. Escape mechanisms become stereotyped into behavior patterns which are applied in new situations and converted into personality traits. Correctional methods for problem children are usually successful if they include the family.—*M. E. Morse* (Baltimore).

4700. Bergemann-Könitzer, M. Entwicklungsaufbau plastischer Gestaltung. (The structural development of plastic form.) *Z. Jugendk.*, 1935, 5, 42-50.—Since 1916 a collection has been made at Jena of plastic productions of children, adolescents and adults. The work was done in clay; no subject or method was suggested or model given. Of course every individual in a social situation is inevitably influenced by or influences his neighbors, but it is better to recognize and record this effect than to avoid by it placing the subjects in a less natural situation. A child of less than a year plays freely with sand, manipulating the material in various moto-sensory ways (designated for purposes of recording by 39 defined terms). As he grows older his simple structures are recognized by him as representing certain familiar objects. The activity then becomes directed towards a goal, but how well he attains it we do not know. Later, using clay, he shows his increasing technical control as well as his changing imagination, interests and personality. Older individuals work with blocks of plaster. Sex and maturity differences are clearly shown at all chronological levels. An understanding of these developmental patterns is essential to the art teacher, to whom the child should turn for help only after he is aware of his goal and aware of his difficulties in reaching it.—*M. Lee* (Chicago).

4701. Beun, L. Het zedelijk oordeel bij kinderen. Een experimenteel psychologisch onderzoek. (Moral judgment in children. An experimental psychological study.) Brussels; Anvers: Standaard-Boekhandel, 1934. Pp. 199.—In order to study the conditions and factors underlying moral judgment in children, Beun asked 2000 girls from 8 to 19 years of age to classify five little stories according to the following good or bad moral qualities: laziness, gluttony, homicide, thieving, lying, cruelty, honor, filial love, and devotion (self-sacrifice or service). Norms were obtained on 252 adults. Results were as follows: (8 to 9 years) the children saw only the situation as a whole, more or less transformed by their imagination, together with the immediate results and the particu-

larly striking circumstances involved upon which they based their judgment; (10 to 12) judgments were more finely drawn and a larger moral field was included, but still there was a lack of insight; (12 to 14) here appeared an awakening of logical intelligence, and the judgment, though often incorrect, was reflective, and when it was correct it rested on inner intellectual motives; (15) the majority of judgments for this age were correct and the motives were well reasoned; (16 to 19) from 16 years on the judgment of the girls had reached maturity. The evolution of the process was conditioned by the intellectual development, habits, personal experiences, and social environment of the children.—*R. Nihard* (Liège).

4702. Bonaventura, E. Lo studio sperimentale del carattere nel bambino lattante. (An experimental study of the character traits of the infant.) *Riv. Psicol. norm. pat.*, 1936, 32, 37-53.—The author reports a preliminary experimental investigation on infants between 7 and 12 months to determine differences in attention and imitation. From this study is shown the applicability of the experimental method to the study of infants and the existence of different character traits that may be considered constitutional rather than conditioned.—*T. M. Abel* (Progressive Education Association).

4703. Bridges, K. M. B. The development of the primary drives in infancy. *Child Developm.*, 1936, 7, 40-56.—The author's discussion is based upon extensive observation and study of infants and preschool children. "The human organism's first and most fundamental behavior drive is to extend and prolong its life and to preserve its individual integrity. This involves sensory discrimination and differentiation of response so as to effect environmental adaptation. Such reactions begin even before birth. Growth and useful coordination of response take place concurrently." A summary of particular drives and their time of appearance from birth to five years is appended. 28 references are listed.—*F. D. McTeer* (Wayne University).

4704. Brooks, F. D. Mental growth in adolescence. *Rev. educ. Res.*, 1936, 6, 85-101.—A review of the literature up to November, 1935, covering age of cessation of mental development, rate of mental growth, constancy of IQ, range of individual differences in intelligence, sex differences in mental development, and problems needing investigation.—*S. P. Hayes, Jr.* (Mount Holyoke).

4705. Brucar, I. Psihologie individuala si educatie. (Individual psychology and education.) *Anal. Psihol.*, 1935, 2, 107-114.—A review of the typologies of Spranger, Litt, Müller-Freienfels, Kretschmer and Klages, and of their application in education. How to observe and judge child personality according to Kretschmer's typology is discussed. The existence of Kretschmer's two main types in school children is treated. Education should use one method with pyknic and another with asthenic children. Adler's contributions to psychology are noted. Child inferiority complexes are almost a rule for every child

entering the school, and the teacher has to know how to deal with them.—*N. Margineanu* (Cluj, Rumania).

4706. **Brumbaugh, A. J.** *Characteristics of pupil population; higher education.* *Rev. educ. Res.*, 1936, 6, 188-193.—A review of the literature from October 1, 1932, to October 1, 1935, covering age, attitudes and beliefs, achievement and intelligence, reading ability and study habits, personality and behavior traits, vocations, and enrolments.—*S. P. Hayes, Jr.* (Mount Holyoke).

4707. **Brumbaugh, A. J.** *Guidance and counseling; higher education.* *Rev. educ. Res.*, 1936, 6, 202-206.—A review of the literature from October 1, 1932, to October 1, 1935, covering the need for guidance, educational counseling, vocational guidance, housing students, health and hygiene, and guidance programs and procedures.—*S. P. Hayes, Jr.* (Mount Holyoke).

4708. **Campbell, E. H., & Breckenridge, M. E.** *An experiment in the study of individual development.* *Child Developm.*, 1936, 7, 37-39.—This is the report of an unpublished 319-page manuscript analysis of all the data recorded by the Merrill-Palmer School on a single child, from the time she was 20 months of age till she was 8½ years old. The techniques experimented with in the study were: (1) A manuscript, in which the qualitative data are reported completely, and considered with (2) graphs, showing time series of quantitative data, made comparable by adoption of the same time base; (3) charts, including a life chart, classified by trait groups, showing ages when certain tendencies first appeared, events in the life of the child, and relevant explanatory data, and constellation charts, showing diagrammatically certain assumed interrelationships of the data. The authors conclude that the study "suggests the need of a somewhat different type of record-keeping for studies of the individual child than for cross-sectional studies. Records for the study of the individual child demand more frequent observations and measurements, more carefully selected ratings of the standardized type, and more adequate observations of the anecdotal type, taken for the purpose of disclosing trends." There is also a need in such a study for more intimate home records and more reports of how specific situations were handled by the adult.—*W. McTeer* (Wayne University).

4709. **Carter, H. D., & Krause, R. H.** *Physical proportions of the human infant.* *Child Developm.*, 1936, 7, 60-68.—"A detailed study has been made of the intercorrelations between 18 external dimensions of new-born babies. The measures included gross bodily dimensions, face measurements, and measures of details of extremities. The correlations used were those published by Bakwin and Bakwin, consisting of two large tables, one based upon data from 609 girls and the other from 608 boys. Inspection of the original correlations, and multiple factor analysis, have led to the following observations: (1) All measurements of different parts of the babies' bodies show some positive correlation, but no two parts are highly intercorrelated. . . . (5) The first factor (obtained by multiple factor analysis) apparently reflects

the general agreement of all the measured variables, and the later factors indicate the presence of and nature of linkages which could not be explained by a single component. The consistency of the first three factors is indicated by the high coefficients of agreement of data from males and from females. (6) Length of body and width of hips vary independently of other bodily dimensions to a greater extent in males than in females. (7) There is much independence of measurements of lengths or widths of different segments. The independence is greater for length measurements."—*W. McTeer* (Wayne University).

4710. **Cattell, P.** *The development of intelligence and motor control in infancy.* *Rev. educ. Res.*, 1936, 6, 3-16.—A review of the literature up to November, 1935, covering the neonate, general development, the development of grasping, conditioned responses in infancy, color discrimination, form discrimination, constancy of mental development, the effects of environment and training on development, and the development of the prematurely born.—*S. P. Hayes, Jr.* (Mount Holyoke).

4711. **Claparède, E.** *Die Jugendkunde und pädagogische Psychologie in Genf.* (Science of youth and pedagogical psychology in Geneva.) *Z. Jugendk.*, 1935, 5, 76-84.—The University of Geneva is the center of the work in child psychology in Switzerland. A chair for experimental psychology was created in 1891 and early research in experimental didactics and pedagogy was undertaken by Lemaitre, Ferrière and Ivanoff. In 1905 *Child Psychology* by Claparède developed the idea of the functional principle in education. Based on this the activity or work schools were founded. In 1912 the Institute J. J. Rousseau was organized and at it a two-year course in child psychology was given. The work there consisted in development and education of abnormal children. From 1911 to 1930 Descoeudres and others have been devising and standardizing tests and studying the development of language. Tests of reading, attention, imagination and reasoning have also been published, and tests of general development and of special ability have been differentiated by Meumann and others. These tests have led to the formulation of laws of development which, in contrast to the theories of association psychology, proceed from the whole to the parts. This was first called syncretic perception by Claparède in 1907. The same is true of motor development (motor syncretism) and Piaget has studied by his clinical method the same order in development of reasoning, moral judgment, etc. A "maison des petits" serves as experimental laboratory for educational method and observation. The Institute Rousseau also conducts an international education bureau.—*M. Lee* (Chicago).

4712. **Cousinet, R.** *Le monologue enfantin.* (Children's monologues.) *J. Psychol. norm. path.*, 1936, 33, 28-39.—A normal boy 4 years 9 months of age, who lived a rather solitary life away from other children and who was in the habit of talking to himself very frequently, was the subject of these observa-

tions. The occasions and topics of the monologues and the accompanying actions were carefully studied. The author concludes that the object of children's monologues is to reconstruct an experience in order better to understand it. A child's only means of obtaining what corresponds to comprehension in an adult is by reproduction of the experience. For example, he must act the part of his mother, who blames him or praises him or interrupts him, in order to understand these activities. Through imitative monologues a child begins to integrate his experiences and acquire knowledge.—*R. E. Perl* (New York City).

4713. **Curtius, O.** *Jugendpsychologische Probleme beim Deutschen allgemeinen ärztlichen Kongress für Psychotherapie.* (Problems in child and adolescent psychology in the general German medical congress for psychotherapy.) *Z. Jugendk.*, 1935, 5, 67-69.—Of 9 reports on this subject at the congress in Breslau, 1935, 3 are mentioned. Johannes Lange (Breslau), spoke of the psychology of life phases. He pointed out the futility of looking for discrete phases in development, since each moment for the individual is unique and growth patterns overlap. The only constant factor is the fundamental orientation to society and values. Acheles (Berlin) dealt with political schooling and the question of thought training as a race-psychological problem. Weizsäcker (Berlin-Grünwald) raised the question of educational advice. The goal is to bring the problem child back into normal social relations. Failure to give aid to this end may result in complete asociality. The earlier help is given the more effective it will be. At critical points in development, especially, advice and help should be easily available.—*M. Lee* (Chicago).

4714. **Dennis, W.** *A bibliography of baby biographies.* *Child Developm.*, 1936, 7, 71-73.—Only those biographies are listed which are primarily baby biographies, including material on the first three years of life; and, to avoid confusion with language biographies, only those are included which touch on two or more phases of the child's development. A number of foreign titles are included in the 64 references listed.—*W. McTeer* (Wayne University).

4715. **Eikenberry, D. H.** *Characteristics of pupil population; secondary education.* *Rev. educ. Res.*, 1936, 6, 185-188.—A review of the literature from October 1, 1932, to October 1, 1935, covering changes in populations, intelligence, behavior problem pupils, high school graduates, and leadership.—*S. P. Hayes, Jr.* (Mount Holyoke).

4716. **Eisenberg, A. L.** *Children and radio programs.* New York: Columbia Univ. Press, 1936. \$3.00.—It is the purpose of this study to answer many of the questions that have arisen in connection with the development of radio programs for children. A survey of 3345 children of various intelligence and social levels living in the New York area was undertaken. The reactions of a large number of parents to children's radio programs were also studied. After examining the data which came out of the questionnaires, the author has developed seventeen recommendations for the consideration of all interested in this problem.—*J. Brockwell* (Brown).

4717. **English, W. H.** *Treatment of behavior disorders in children. A review of the literature.* *Psychiat. Quart.*, 1936, 10, 45-71.—*C. R. Atwell* (Boston Psychopathic Hospital).

4718. **Georgiade, C.** *Metodele de studiu in psihologia copilului.* (Methods in child psychology.) *Anal. Psihol.*, 1935, 2, 17-46.—A critical review of main sources and methods currently used in child psychology, with particular attention to Anderson's study in the *Handbook of Child Psychology*, edited by Murchison. In addition to it some attention is given to German and French methodological contributions. The biographical method is divided into biography and genetic methods. A more important role is given to pediatrics. The paper has an informative character and is designed to serve Rumanian teachers and psychologists not familiar with English contributions.—*N. Margineanu* (Cluj, Rumania).

4719. **Gesell, A.** *Die Morphologie des Verhaltens in der kindlichen Entwicklung.* (Morphology of behavior in child development.) *Z. Jugendk.*, 1935, 5, 91-96.—All behavior has form or Gestalt; thus one may speak of its morphology if we can record and measure it accurately and objectively. Developmental psychology especially must depend to a large extent on the laws of physiology, such as polarity, symmetry, organization centers and induction influences. A behavior pattern means a total Gestalt reaction to be described only in relation to a particular situation. A behavior item is a part or element of patterns which recur in various settings. To determine the laws governing the changing Gestalten one must examine a series of behavior patterns such as have been collected for the use of the forefinger. These behavior patterns in response to a constant environment from 18 weeks to 40 weeks are briefly described. That this is a question of maturity, not training, is proved by the co-twin control method. This morphological development in the child's organ of touch must underlie his experimentation with the environment and in fact his whole mental life. It will be a long task to discover all the laws of development of behavior, but their importance cannot be denied.—*M. Lee* (Chicago).

4720. **Gesell, A.** *Die Yale-Filme der kindlichen Entwicklung.* (The Yale films of child development.) *Z. Jugendk.*, 1935, 5, 96-100.—This comprehensive collection of films of the first year and many studies of later ages based on 200 normal children marks a new development in scientific research. The pictures are taken each month of the child in a specially constructed dome enclosed by a one-way screen. Certain aspects of behavior are especially studied: body control, handling of objects, attentive reactions, etc. Observers behind the screen make notes, and during the same period trained visitors in the home make records of the child's growth, health, play activities, social responses, etc. The pictures are then carefully analyzed to find consistent growth patterns, and an atlas of selected pictures is published for purposes of instruction. Sound films are now available in which important aspects of the behavior of the child are



pointed out and explained by Gesell. The series of films for laymen and specialists called *Life Begins* comprises the normative film, the naturalistic film, the child guidance film, and special studies and demonstrations showing the experimental method and techniques used.—*M. Lee* (Chicago).

4721. Graewe, H. *Das Tierzeichnen der Kinder*. (Children's drawings of animals.) *Z. pädag. Psychol.*, 1935, 36, 251-256; 291-300.—The most important part of the study of children's drawings is observation of the child while working and his explanation of his picture. The first stage of animal drawings is an indefinite schema of a living thing used indiscriminately for man or animal. The preschool child cannot break through this and draw from the object. Later the outline is turned into an animal by adding some distinguishing characteristic. The parts of the body are drawn piecemeal and merely connected, often in the wrong order. This stage is followed by a synthetically correct schema in which emphasis is laid on total outline and organic structure is attempted. When the outline is too difficult for the child to grasp as a whole he regresses to the piecemeal method. All normal children reach the schema stage; the artistic pass through it quickly, but a considerable number never get beyond it. Development through this stage is relatively uniform, while beyond it individual differences are marked.—*M. E. Morse* (Baltimore).

4722. Jaensch, E. R. *Wege der Jugendanthropologie*. (The ways of youth anthropology.) *Z. Jugendk.*, 1935, 5, 14-25.—The separation between psychology and philosophy produced a two-fold culture, the former or sub-life culture furnishing the technical aids for the use of the latter or super-life culture. The gap is bridged by a life culture which regards the individual as a body-soul unity. In the psychological anthropology of Marburg the factual groundwork is retained, but a philosophical goal of classic German idealism is accepted: to raise and ennoble the life of mankind. For instance, the importance of the pedagogic implications of the eidetic studies is clearly recognized. The strongly eidetic child has a close relationship with the visual world. External and internal are for him only an undifferentiated unity. Since from this eidetic capacity comes the child's strongest vigor and drive it should be cultivated by giving it the fullest opportunity for use in education. But it should also be directed so it will become the basis for understanding the real perceptual world and for a good social orientation in it. Otherwise there is danger of too much isolation at puberty when the self concept is developed. The idealism we seek for adolescents is in line with the philosophy of Kant.—*M. Lee* (Chicago).

4723. Jones, H. E. *Relationships in physical and mental development*. *Rev. educ. Res.*, 1936, 6, 102-123.—A review of the literature up to November, 1935, covering head measurements, body build, anatomical and physiological age, pubescence, body chemistry (including endocrine factors), disease and physical handicap, physical abilities, physical traits

in relation to scholarship, evidence from mental defect, evidence from sex differences, evidence from growth studies, evidence from studies of later maturity, relationships with other mental traits than intelligence, and nutrition.—*S. P. Hayes, Jr.* (Mount Holyoke).

4724. Koga, Y. *A study of the attitude toward war or peace of adolescent students*. *Jap. J. appl. Psychol.*, 1936, 4, 1-13.—40 items modeled after Thurstone and Peterson's attitude-toward-war scale, forms A and B, were presented to 18 groups from different college and secondary schools, comprising 1642 students in all, in order to determine whether there is some difference of opinion between students of Japan and of America regarding war and peace. The author found that there is a close correspondence between them; the reliability coefficient is high, with a few exceptions. Japanese students are, however, somewhat more positive in their attitude toward war than American students. No significant divergence was found between college students and higher-class students of secondary schools.—*R. Kuroda* (Keijo).

4725. Kume, K. *The development of posture and locomotion of an infant during the first year*. *Jap. J. appl. Psychol.*, 1936, 4, 41-66.—The development of posture and locomotion of the author's child was compared with the descriptions of Bühler, Gesell, Shirley and others. Though its general process of development did not differ from that observed by these writers, a slight divergence seemed to be due chiefly to the circumstances that (1) its head was relatively larger and possibly heavier, and (2) the muscles of its feet developed disproportionately.—*R. Kuroda* (Keijo).

4726. Lambercier, M., & Rey, A. *Contribution à l'étude de l'intelligence pratique chez l'enfant*. (Contribution to the study of practical intelligence in children.) *Arch. Psychol., Genève*, 1935, 25, 1-59.—The authors experimented with more than 100 children from 4 to 8 years of age, using an apparatus in which the child could not obtain a bonbon except through indirect means. The apparatus consisted of a bar with an acute angle about two-thirds of the way from one end, and was suspended by a cord from the center of the room. The bonbon was placed on the end nearer the bend and could be obtained by pulling down the bent section. In a second part of the experiment the bonbon was placed on the end farther from the bent section and could be obtained only after the bar was set in motion at the bend and then released. A series of complementary experiments were used in which strings placed at various points were used as intermediary mechanisms. Several groups of behavior activities evolving with age were found. The direct way of attack exerted a very powerful attraction. This attraction was a matter of primary nervous structure and was overcome to the degree that the child's activity, originally aroused to fever heat in his vain effort to success by direct grasping and rejecting any other suggestion, finally set up a resistance to the immediate environment. Thus the behavior could be conducted in the direction of the

detour mechanism. Although other factors were able to determine this evolution in behavior, it seems to the authors that the activity in itself has its own possibilities of evolution.—*M. R. Lambercier* (Geneva).

4727. **Love, L. L.** *Guidance and counseling; secondary education.* *Rev. educ. Res.*, 1936, 6, 199-202.—A review of the literature from October 1, 1932, to October 1, 1935, covering guidance programs, vocational choice, occupational information, and guidance problems.—*S. P. Hayes, Jr.* (Mount Holyoke).

4728. **Mangold, G. B.** *Problems of child welfare.* (3rd ed.) New York: Macmillan, 1936. Pp. xvi + 549. \$3.00.—The text has been completely rewritten in accordance with the change which has taken place in the last ten years in methods and principles of social work, particularly change in emphasis from family to child welfare. Problems of mortality, health, recreation, education, vocational guidance, social and mental hygiene, legislative reform, delinquency, dependency and neglect are presented with their historical background, social significance, and present status. The emphasis throughout is on social trends in the methods of handling these problems, especially the growing tendency toward making education social. Constant use is made of the findings of the White House Conference. "The success of the child welfare program depends largely on the progress achieved in the field of economic and social reform and in psychiatric investigation." "Without an improved social order, children will not regain the educational privileges of yesterday, but will again be forced prematurely into industry and be required to live under conditions of poverty and distress that will greatly increase juvenile delinquency and accentuate behavior problems."—*M. P. Montgomery* (Fari-bault, Minn.)

4729. **Mary, Sister, & Hughes, M. M.** *The moral and religious development of the preschool child.* *Stud. Psychol. Psychiat. Cathol. Univ. Amer.*, 1936, 4, No. 1. Pp. 51.—Through asking 15 abstract questions of 693 Catholic and 525 non-Catholic children moral and religious development was studied. No significant differences were found between Catholics and non-Catholics, but purely religious questions were not asked of non-Catholics. Moral ideas such as obedience, right of ownership, love of parents, etc., were found early, with highest growth from 3 to 5 years, which corresponds with the period of rapid physical and mental growth. Religious development shows that definite concepts of God, Heaven, angels, and the Holy Family are also found at the preschool age, as evidenced by "correct" answers. Since these concepts develop early parents "need to be made aware of the undeveloped spiritual potentialities of preschool children."—*D. T. Spoerl* (Springfield, Mass.)

4730. **Meek, L. H., & Jersild, A. T.** *Mental development from two to twelve years.* *Rev. educ. Res.*, 1936, 6, 17-48.—A review of the literature up to November, 1935, covering the growth of intelligence, mental retardation, language, learning, memory, imagination, attention, perception and concepts,

moral and esthetic judgments, and children's interests.—*S. P. Hayes, Jr.* (Mount Holyoke).

4731. **Meerovitch, R. I., & Kandaratzkaya, K. M.** [The level of aspiration in hysterical children.] *Trud. Inst. Isuch. Mozga Bekht.*, 1936, 5, 162-183.—Children with hysterical traits of character were investigated partly by the methods of Kurt Lewin, partly by the play method used in Bekhterev's Institute for Brain Research. 40 children were investigated, including 30 hysterical children, 5 normal pupils of the same age (9-12 years) and 5 children with organic lesions of the central nervous system. On the basis of the experimental data the experimental subjects were divided into two groups: (1) children under school influence, and (2) children without pedagogical correction. The main trait of the first group is the high level of their aspiration even before the start, which gives afterward many-sided conflict situations. The aspirations of the hysterical group are stable and independent of the environment, which defines their inadequate behavior. The adequate behavior of the hysterical group after pedagogical correction is based on the relation of aspirations with possibilities; often the possibilities are undervalued by the child himself. The tendency to the highest aim is expressed mostly in normal children; after the first trials the level of aspiration is lowered. In subjects with organic lesions of the central nervous system a low level of aspiration is observed.—*A. Yarmolenko* (Leningrad).

4732. **Mercurio, R.** *Le basi biopsichiche dell'assistenza al neonato e al lattante.* (The biopsychic bases of help for the newly born child and for the nursing.) *Pediatrics*, 1935, No. 4.—*G. M. Hirsch* (Rome).

4733. **Meredith, H. V., & Stoddard, G. D.** *Physical growth from birth to maturity.* *Rev. educ. Res.*, 1936, 6, 54-84.—A review of the literature up to November, 1935, covering research technique, growth in bodily dimensions, changes in bodily proportions, factors conditioning growth, ossification and calcification, pubescence, clinical instruments and needed research.—*S. P. Hayes, Jr.* (Mount Holyoke).

4734. **Miliavskaya, V. O.** [The work curve of problem children in connection with fatigue and the changes of the work attitude.] *Trud. Inst. Isuch. Mozga Bekht.*, 1936, 5, 97-136.—There were determined and analyzed the stimuli and conditions of the increase and decrease of the work curve. The experiment with school work, reckoning, writing, tapping, etc., during 30-150 minutes showed that psychic satiation in problem children appears much earlier than fatigue. The satiation as well as the work deviations are determined fundamentally by the child's work attitude, the other factors being: the intellectual level, traits of character and temperament, the work habits, and self-valuation. The variation and stimulation of work decrease the satiation, as a rule. Besides these traits, common to all the investigated subjects, many typical differences were stated in experiments. When the galvanic reflex and breathing were registered, a correlation between both

these processes and the development of satiation was found. The main and defining factor for work efficiency in problem children is not fatigue, but satiation. The work efficiency can be increased by the development of a positive work attitude, the increase of the self-pretensions, and the variation of the school tasks.—*A. Yarmolenko* (Leningrad).

4735. **Myasishchev, V. N.** *Lichnost i trud anormalnogo rebenka.* (Personality and work of problem children.) *Trud. Inst. Isuch. Mozga Bekht.*, 1936, 5, 3-23.—The problem child must be studied and treated from the viewpoint not of formal functional psychology but of his personality and reactions to environment. His work capacity and work attitude are the most important expressions of his personality. The characteristic traits of feeble-minded children, however, are the result of developmental defects of psychological functions and not essentially disorders of relationships. This fact determines the differences in educational policies for the two groups.—*M. E. Morse* (Baltimore).

4736. **Nanningen-Boon, A.** *Het denken van het doofstomme kind.* (The thinking of a deaf-mute child.) Groningen: Wolters, 1934. Pp. 237. F 2.90.—The writer is the mother of the deaf-mute subject. Following the researches of C. and W. Stern, she developed her own visual method for teaching speech. A careful analysis of the development of speech, observation, and reasoning in the child is presented. The book makes many contributions to the understanding of the mental life of children.—*O. N. de Weerd* (Beloit).

4737. **Nestor, I. M.** *Metode experimentale de cercetare psihologica a copilului de 6-7-8 ani, care intra in clasa I-a primara sau clasa II-a primara.* (Experimental methods of psychological research concerning the child of 6-7-8 years old entering first or second class of public school.) *Anal. Psihol.*, 1935, 2, 70-106.—A critical review of C. Bühler's and H. Winkler's methods of psychological study and examination of children entering the public school. Large credit is accorded to Winkler. His views and methods are largely adopted in the Institute of Psychology of the University of Bucharest. The abilities which should be considered and examined are: (1) constructive combination, (2) understanding of forms, (3) motor memory, (4) immediate auditory memory, (5) meaningful memory, (6) vocabulary and word understanding, (7) verbal fluency, (8) number understanding, (9) visual rote memory, (10) understanding of abstract concepts, (11) imagination, (12) denomination, (13) speed in thinking and understanding, (14) manual ability, (15) attention and power of concentration. How to apply tests for the measure of these abilities and how to devise psychological profiles useful in school and after school in vocational guidance are considered. Testing has to be completed by teachers' observations of child behavior.—*N. Margineanu* (Cluj, Rumania).

4738. **Nikolskii, V. N.** *Tipy planirovaniya i vypolneniya zadach trudnovospituemymi detmi.* (Problem children's types of planning and accomplishment.)

*Trud. Inst. Isuch. Mozga Bekht.*, 1936, 5, 69-96.—Problem children's reactions to set tasks were studied with the purpose of determining the causes of their decreased work capacity. Their typical methods of working were: negative, avoiding mental effort and without hope or desire for success; aimless, with no way out of difficulties; labile, with general excitability and disinclination for work (this group includes most of the neuropathic children); inhibited, due to inferiority feelings; elective, with almost normal performance.—*M. E. Morse* (Baltimore).

4739. **Nikolskii, V. N.** [The peculiarities of the work curve of problem children on the basis of psychophysiological experiments.] *Trud. Inst. Isuch. Mozga Bekht.*, 1936, 5, 137-162.—The aim of the investigation was to state the psychological and objective physiological stigmata of fatigue in connection with attitude changes, serving for differentiating these processes in problem children. The physiological components of work-ability changes in different phases of work in the same children were stated. The following groups were compared: problem children, pedagogically neglected children, neurotics and normal children, all 11-14 years old. The coefficients of quality and quantity of work were stated, and the indicators of vegetative reactivity (galvanogram and pneumogram) were registered. Psychological and physiological tests were given before and after the work. The possibility of a differential diagnosis of fatigue and attitude changes was established by these methods. The psychological coefficients decrease in the final moments of work if the work efficiency is independent of variations and stimulations. In the vegetative components fatigue is expressed by deviations of the galvanic reflex, and even the absence of it. The breathing shows arrhythmia and the dominance of expiration. Psychic satiation (attitude changes) gives an oscillating galvanogram and arrhythmical pneumogram with large aspiration and expiration.—*A. Yarmolenko* (Leningrad).

4740. **Otto, E.** *Die Jugendkunde in der Tschechoslowakei.* (Youth psychology in Czechoslovakia.) *Z. Jugendk.*, 1935, 5, 84-91.—The psychological institute of the German University in Prague, led by Lindworsky and Scola, bases its theoretical teaching on developmental psychology. In practice, which is closely allied to the theory, work is done in intelligence testing, type differentiation, and ambitions. Practical and theoretical work is also carried on in vocational guidance. At the pedagogical institute at Prague the chief interests are abnormal and feeble-minded children and intelligence testing. There are three institutes for vocational guidance. The society for child research in Brünn studies the mental development of youth in the light of Gestalt psychology. The land-institute in Pressburg, standardizing tests in four languages, is especially concerned with national differences. The effect of the social milieu has also been investigated, as well as total development from an anthropological standpoint. Five Czech conventions have been held for



research workers in child psychology. Recent publications in both German and Czech are listed.—*M. Lee* (Chicago).

4741. **Reisner, E. J.** [Ed.] *Parents and the latch-key; a symposium on freedom and guidance for the adolescent, by parents of children in the Horace Mann Schools and Lincoln School.* New York: Teachers College, Columbia Univ., 1936. Pp. 63.—*R. R. Willoughby* (Brown).

4742. **Reuter, E., Blumer, H., Burgess, E., & Frazier, E.** *The adolescent world.* *Amer. J. Sociol.*, 1936, 42, 82-84.—The "adolescent world" is the world as conceived by the adolescent. It may be thought of as the interests, activities, values, sentiments and beliefs of adolescents. Suggestions are made for the study of this world, mostly by means of autobiographies, letters and diaries.—*J. Brockwell* (Brown).

4743. **Rowntree, J. L.** *A handbook of child guidance.* *Univ. Wash. Ext. Ser.*, 1936, No. 4. Pp. 95. \$0.35.—A revised edition of the publication. The book "has a two-fold purpose; first that of aiding both teachers of child care courses and leaders of adult study groups in organizing and presenting material to their classes; second, that of affording parents and others interested in children a deeper insight into the child's needs and reactions." Part I concerns aims and methods in parent education, with a discussion of goals, courses, direction of case studies, etc.; Part II deals with the social and mental development of the child, the factors involved, and the development of habits and attitudes. The points discussed have been put in question form because they lend themselves to conciseness and yet make possible the logical development of ideas.—*R. Goldman* (Worcester State Hospital).

4744. **Sander, F.** *Die Jugendkunde in Lehre und Forschung der Psychologischen Anstalt der Friedrich-Schiller-Universität, Jena.* (Youth psychology in the teaching and research of the psychological institute of the Friedrich Schiller University, Jena.) *Z. Jugendk.*, 1935, 5, 26-29.—The work at the institute consists in: (1) introductory lectures on present-day German totality psychology, an introductory practical course in psychological methods and a survey of experimental results; (2) a course on child and adolescent psychology, tracing chronological development, and a parallel practical course in which systematic observations are made and various problems discussed and diagnosed; (3) a series of lectures on psychic anthropology, in which the body-soul whole is described in its developmental phases and in relation to race, nation and present conditions. Many students then take up some special research problem such as creative activity in art or music, inheritance of mental ability, motor characteristics, significance of play, or social life. Recently such investigations have been extended and similar research projects have been undertaken in different parts of Germany.—*M. Lee* (Chicago).

4745. **Schaubert, H.** *Zur Bedeutung der Individualpsychologie für die Erziehung Verwahrloster.*

(The significance of individual psychology for the education of foundlings.) *Z. pädag. Psychol.*, 1934, 35, 172-176.—Individual psychology attributes the asocial attitude of the child simply to an inferiority complex. Certain reservations must be made in regard to this interpretation, and heredity and environmental influences must be taken into account when dealing with the character of the child.—(Courtesy *Année psychol.*)

4746. **Sherman, M., Sherman, I., & Flory, C. D.** *Infant behavior.* *Comp. Psychol. Monogr.*, 1936, 12. Pp. 107.—Under carefully controlled experimental conditions and with standardized apparatus and technique, the authors investigated the reactions of the eyes, the responses to painful stimulation, the defense reactions, the movements of the legs in response to pressure stimulation, the grasp reflex, and miscellaneous reflex responses of infants ranging in age from several hours to sixteen days. The data are genetic in nature, indicating the development of the given responses as a function of age. There is a discussion of the nature of infant behavior patterns. The most characteristic thing about the behavior patterns studied was their inconstancy. "Regarding specific behavior items, an infant is as likely to cry as to be quiet, and is as likely to be wet as dry when examined at any given time. With age the frequency of quiet and of wetness increase." Babies classified by the nurses as "good" were generally less responsive than others. "Sensori-motor and defensive responses of newborn infants are probably dependent upon sub-cortical processes. These responses change in type as cortical dominance develops." A section on theoretical considerations deals primarily with the relation of cortical function to the observed reactions. Extensive bibliography.—*N. L. Munn* (Peabody).

4747. **Stogdill, R. M.** *Experiments in the measurement of attitudes toward children: 1899-1935.* *Child Develpm.*, 1936, 7, 31-36.—"The present paper is concerned only with those investigations in which some test or questionnaire has been employed for recording and scoring the attitudes of adults toward children." The author summarizes the findings as follows: (1) Parents and teachers are very conservative in their attitudes toward children. "These two groups approve of child behavior which makes for smooth running of the household and classroom, but they show little regard for the wholesome personality development of the child. (2) Clinical psychologists approve of an active, extrovert, social adjustment in a child, regardless of the inconvenience to parents or teachers. . . . (5) Children are somewhat more liberal in their attitudes toward children than parents are and women are slightly more liberal than men. (6) The results of certain of these studies suggest that unwholesome parental attitudes are associated with religious, social and economic conservatism, and with educational and socio-economic deprivation." 28 references are given.—*W. McTeer* (Wayne University).

4748. **Strang, R.** *Characteristics of pupil population; elementary education.* *Rev. educ. Res.*, 1936,

4747-177-185.—A review of the literature from October 1, 1932, to October 1, 1935, covering intelligence, achievement, recreation, physical proficiency, mechanical ability, personality and character, maladjustment, and relationships of these factors to one another.—S. P. Hayes, Jr. (Mount Holyoke).

4749. Strang, R. Guidance and counseling; elementary education. *Rev. educ. Res.*, 1936, 6, 194-199.

—A review of the literature from October 1, 1932, to October 1, 1935, covering surveys, child guidance clinics, guidance programs, vocational guidance, counseling, tests used in clinics, measurement of achievement, tests of personality and character, observation, and choice of tests for different purposes.—S. P. Hayes, Jr. (Mount Holyoke).

4750. Tumlrz, O. Der Stand der Jugendkunde in den Ländern europäischer Kultur. (The position of youth psychology in the lands of European culture.) *Z. Jugendk.*, 1935, 5, 7-14.—The first period in child psychology, from Preyer to Meumann, was concerned with amassing results of scientific experiments. The failure to form a complete picture of the living child from such structural elements gave rise to the second period, led by Helmuth and Stern, in which old methods were discredited and bold unproved theories advanced. The idea of the unconscious became important, as it gave unity and meaning to the psychic life. The third period will arrive only when the value of both scientific method and psychological theory are recognized and both are utilized to understand the whole child in relation to his environment. The 1935 issue of *Z. Jugendk.* is an attempt to further mutual understanding and cooperation between psychologists by presenting recent trends and activities in child psychology in various European countries. Since the personality and characteristics of children depend to a large extent on the national culture the results will vary, and since the temperament of the investigator, whether realistic or idealistic, will determine his choice of method, conclusions arrived at will differ, but except for the mechanistic trend in North America there is to be seen a striking agreement in viewpoint, which tends to be anthropological and socio-biological.—M. Lee (Chicago).

4751. Tumlrz, O. Die Jugendkunde in Österreich. (Youth psychology in Austria.) *Z. Jugendk.*, 1935, 5, 70-75.—Austria was the first to recognize the importance of child psychology in education. All teachers must pass examinations in all its branches, and pedagogy is taught along with child care in high schools for girls to prepare them to be good mothers. The work in Austria has centered upon Tumlrz's extensive investigations in adolescent psychology at Graz. His publications setting forth his theories are widely known. Vienna has been the center for research in child psychology, directed by Karl and Charlotte Bühler. The latter school has been based on thought psychology (Kölpe) while the Graz school is built on the disposition psychology of Meinong and Witasek. From Vienna also come psychoanalysis and Adler's individual psychology.—M. Lee (Chicago).

4752. Uhrbrock, R. S. Words most frequently used by a five-year-old girl. *J. educ. Psychol.*, 1936, 27, 155-158.—A girl dictated experiences into an Ediphone each day for 6 weeks before her fifth birthday. A sample of 24,000 words was obtained. Frequency tables are presented.—A. W. Melton (Missouri).

4753. Valentiner, T. Das Institut für Jugendkunde in Bremen. (The institute for child psychology in Bremen.) *Z. Jugendk.*, 1935, 5, 61-64.—The Institute was founded in 1911 in order to advance in all ways scientific and practical work in the field of child and adolescent psychology and education. The first psychological work undertaken was a comprehensive investigation of fantasy in children aged 9-18. For the past 15 years the more practical problems of student selection and measurement of special traits and abilities have been the chief interest. The lines of activity at present are: (1) recording and organizing all individual records of school achievement and tests to the end that a valuable prognosis of his later career can be made for any 10-year-old; (2) recording and correlating with subsequent achievement all vocational guidance given in industry in Bremen and at the Institute; (3) scientific investigation based on (1) and (2); (4) exhibitions of writing and drawings and other work products; (5) maintenance of a reference library; (6) scientific publishing; (7) consultation service for schools. References to the various publications are given.—M. Lee (Chicago).

4754. Vermeulen, G. La psychiatrie dans ses rapports avec la psychopathologie de l'enfant. (Psychiatry in its relation to child psychopathology.) *J. belge Neurol. Psychiat.*, 1936, 36, 133-141.—While great strides have been made in the study of the psychopathology of the child, the author believes that in these investigations the child has been regarded too much as an isolated entity without due consideration of his relation to his adult environment. While the psychiatry dealing with adults is of little assistance for the comprehension of psychopathic disorders in children, the latter aid greatly in an understanding of the development of psychoses in adult life. Psychotic disturbances have a long history and very often the beginning lies in childhood. The young brain is easily damaged in the course of infectious disorders or by traumatisms, and such cerebral injuries which were overlooked at the time may often be the direct cause of what is later considered a disorder of purely psychogenic origin. The child in his development passes through various stages, which represent attempts to adapt his personality to the environment. One or another of these phases may remain fixed and thus maintain the individual at an inferior stage characterologically. With an understanding of these mechanisms it will be possible for the patient to review more satisfactorily those phases of his development which previously he had not been able to manage adequately.—H. Sys (Cornell).

4755. Watanabe, B. The association of young pupils. *Jap. J. appl. Psychol.*, 1936, 4, 14-40.—Stimulus words selected from current newspapers, journals and radio talks were given to 2211 adoles-

cents from 13 to 19 (girls) or to 24 (boys). A belief that mental tendencies of young persons can well be observed through their reaction words is stressed.—*R. Kuroda (Keijo)*.

4756. Wellens, L. *Die Jugendpsychologie in Belgien*. (Youth psychology in Belgium.) *Z. Jugendk.*, 1935, 5, 100-106.—Early interest in child development in Belgium preceded the institute for abnormal children founded by Decroly in 1901. His zeal in observation and ability to understand the child led to the ideo-visual method of reading, the ideo-graphic method of writing, and in general to respect for the central interests, needs and play drives of the child. He insisted on a suitable environment for a child in which he may be free to explore. His theories were put into practice in a school. In 1906 Decroly founded a society for pedagogical technique in Brussels. From that time on the necessity of training in child psychology for all teachers has been recognized. In 1928 Jodat founded a laboratory for pedagogy and child psychology, the object of which was to investigate new methods of education. Since 1930 a center for systematic observation of pupils at Lüttich has done extensive and successful work in (1) testing children psychologically, medically and pedagogically for suitable grouping into classes, (2) detection of abnormal children, and (3) selection of the most gifted and vocational guidance after school. A biometric private laboratory founded by Wellens and Ledent in 1920 is studying mental and physical capacities of children. Finally a national

center for education was opened in 1935 in honor of Decroly.—*M. Lee (Chicago)*.

4757. Wellman, B. L. *Motor development from two years to maturity*. *Rev. educ. Res.*, 1936, 6, 49-53.—A review of the literature up to November, 1935, covering general studies, special abilities, the influence of motivation, motor learning, the influence of practice, relation to mental ability, relation to physical condition, relation to personality, racial differences and handedness.—*S. P. Hayes, Jr. (Mount Holyoke)*.

4758. Wintsch, J. *A propos d'une étude sur l'intelligence pratique chez l'enfant*. (A study of practical intelligence in the child.) *Z. Kinderpsychiat.*, 1935, 2, 146-149.—A description of André Rey's studies of intelligence in children, which use tests of a practical nature. Situations such as the following are used: "A candy, enclosed within a railing, is attached to a string the free end of which has to be passed from bar to bar in order to bring it within reach." M. Rey's situations enable the observation of the intellectual process, and it is this rather than certain end products which he believes should be emphasized in the study of intelligence. "Intelligence is to the highest degree a dynamic process. . . . It is therefore most advisable to see its physiognomy rather than its level."—*D. Shakow (Worcester State Hospital)*.

[See also abstracts 4326, 4360, 4379, 4380, 4516, 4542, 4544, 4558, 4622, 4624, 4638, 4640, 4641, 4679.]



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